

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

LUCENT TECHNOLOGIES, INC. :
 :
 Plaintiff, :
 :
 v. :
 :
NEWBRIDGE NETWORKS CORP. :
and NEWBRIDGE NETWORKS, INC. :
 :
 Defendants. :

Civil Action No. 97-347-JJF

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OPINION

September 21, 2001
Wilmington, Delaware

Farnan, District Judge.

Pending before the Court in this patent infringement action is a Motion For Judgment As A Matter Of Law¹ (D.I. 616) filed by Plaintiff, Lucent Technologies, Inc. ("Lucent") and a Renewed Motion For Judgment As A Matter Of Law At The Close Of The Evidence (D.I. 618) and a Motion For A New Trial On Certain Issues (D.I. 617) filed by Defendants, Newbridge Networks Corporation and Newbridge Networks, Inc. (collectively "Newbridge").² By its Motion For Judgment As A Matter Of Law, Lucent requests the Court to enter a judgment of infringement against Newbridge on Claims 1 and 4 of U.S. Patent No. 4,750,136.

By its Renewed Motion For Judgment As A Matter Of Law, Newbridge requests the Court to enter a judgment of non-infringement as a matter of law with regard to all five of the patents-in-suit. Specifically, Newbridge contends that Lucent failed to establish infringement by a preponderance of the evidence, or in the alternative, that several defenses preclude a

¹ In addition to its Motion For Judgment As A Matter Of Law, Lucent has also filed several other post-trial motions, including a motion for permanent injunction, adjustment of damages, enhancement of damages, attorneys' fees and prejudgment interest on the judgment entered in this case. Although all of Lucent's Motions are advanced in a single motion paper (D.I. 616), the parties have separately briefed these issues. Accordingly, the Court will address the remaining motions pending in this case by a separate Memorandum Opinion and Order.

² Newbridge filed two separate motion papers, one for its Renewed Motion For Judgment As A Matter Of Law and one for its Motion For A New Trial. However, Newbridge briefed these Motions together, advancing its Motion For A New Trial, as an alternative motion. (D.I. 628).

finding of infringement against Newbridge. Alternatively, Newbridge seeks a new trial on the questions of infringement and damages, as well as on certain of its defenses, including the validity of the patents and the existence of an implied license to practice the patents. (D.I. 617).

For the reasons set forth below, the Court will deny Lucent's Motion For Judgment As A Matter Of Law, grant in part and deny in part Newbridge's Renewed Motion For Judgment As A Matter Of Law, and deny Newbridge's Motion For A New Trial On Certain Issues.

BACKGROUND

I. Procedural Background

Plaintiff Lucent Technologies, Inc. ("Lucent") filed the instant action against Defendants Newbridge Networks Corporation and Newbridge Networks, Inc. (collectively "Newbridge") on June 24, 1997 (D.I. 1), initially alleging infringement of four patents: (1) U.S. Patent No. 4,769,810 (the "Eckberg '810 patent"); (2) U.S. Patent No. 4,769,811 (the "Eckberg '811 patent"); (3) U.S. Patent No. 4,979,174 (the "Cheng '174 Patent"); and (4) U.S. Patent No. 4,437,087 (the "Petr '087 Patent"). On January 13, 1998, Lucent amended its Complaint to add a claim of infringement under a fifth patent, U.S. Patent No. 4,750,136 (the "Arpin '136 Patent"). (D.I. 25, 30).

A three week jury trial was held on all issues presented by

the parties, except certain equitable defenses. The jury returned a verdict in favor of Lucent on all issues, except infringement of Claims 1 and 4 of the Arpin patent. Following the trial, the parties filed a stipulation resolving the outstanding equitable issues. (D.I. 683). Accordingly, the only issues remaining for the Court's consideration are those raised by the parties' post-trial motions.

II. Technological Background

The patents at issue in this action relate generally to data networking. (D.I. 551).

A. Eckberg '810 Patent and Eckberg '811 Patent

The Eckberg '810 and '811 patents disclose methods and apparatus for controlling congestion in a packet-switching network. In an end station of a packet-switched network, a data message is broken into shorter pieces called packets, which are then individually transmitted by the end station into the network. Each packet includes a header. The header contains information identifying the destination of the packet, or in some implementations, the connection to which the patent belongs. The nodes of the packet-switched network use the information in the header to route the packet through the network to the intended destination end station. At the destination end station, the packets are reassembled into the original message. (D.I. 551 at 14-15.)

When several users attempt to utilize a network at the same time, congestion can occur. Congestion occurs when a network component, or a portion of a network component, is required to process more packets than it can handle. In addition to long delays in data transmission, congestion can also result in packet loss. As described in the Eckberg patents:

A principal area of packet congestion is in buffers, or queues, in each node, particularly where the buffers become unavailable to store incoming packets. Yet the buffer requirement is closely related to the utilization of processor real time and/or link bandwidth. When the processor real time is exhausting, or when the link bandwidth is not sufficient to handle the packet traffic, queues within the switching node will build up causing a long delay. Finally packet buffers will be exhausted, resulting in the dropping of packets.

('810 patent, col. 2, ll. 26-35; '811 patent, col. 2, ll. 25-34).

Congestion and the resulting loss of packets, can be prevented and controlled by allocating bandwidth to users' connections and permitting new connections only when bandwidth is available.

Bandwidth is the amount of data that can be sent per unit of time.

To allocate bandwidth appropriately in this manner, the network must provide a means for users to select their bandwidth needs.

Once the network understands the user's needs, the network creates the appropriate parameters for the user and enforces those parameters for the user. The agreement between the user and the network concerning the user's bandwidth needs is called a traffic contract. Once a traffic contract is established between

the user and the network, packets that are transmitted at a rate in excess of the agreed parameters are automatically discarded at the network's entry point.

Because traffic on the network varies at times, the automatic discarding of packets that exceed a user's allocation is not efficient. Specifically, there may be times that the network could have handled the excess traffic instead of dropping those excess packets. The Eckberg '810 and '811 patents teach a traffic enforcement mechanism that allows excess packets to be marked, instead of automatically discarded. By marking excess packets, the network can decide whether to discard marked excess packets during periods of congestion, or to allow those marked packets to proceed during periods of relative quiet. Generally speaking, the claims of the '810 patent are directed toward marking excess packets, and the claims of the '811 patent are directed toward dropping the marked packets during periods of network congestion. (D.I. 551 at 16-18.)

B. Cheng '174 Patent

The Cheng '174 Patent teaches a method of handling random and bursty errors in a data transmission system. A random error is typically caused by noise and generally results in a single bit error. A bursty error is usually more serious and results in multiple bit errors. When a random or bursty error occurs in the header of a packet, that packet may be delivered to an incorrect

destination address. (Cheng, col. 1, ll. 11-23).

Although the prior art in this field taught various techniques for dealing with these types of error, the prior art was not adequate in packet-switching systems involving high transmission speeds. High transmission speeds often limited the effectiveness of the prior art's error correction codes, because only a few bytes of error correction coding could be used if the speed was to be maintained.. (Cheng, col. 1, ll. 24 - 46). By using only small amounts of error correction coding, bursty errors could not be quickly and accurately detected.

To resolve the problems associated with the prior art, the Cheng Patent teaches a method to detect both random and bursty errors using only a small amount of error correction coding. The patent teaches a switch between two states: (1) an error correction circuit state (ECC); and (2) an error detection circuit state (EDC). The ECC state is used during normal conditions. The EDC state is used when an error is detected on the assumption that bursty conditions have arisen. If the assumption proves true and bursty conditions have arisen, the many errored packets that result from bursty conditions will be detected and discarded, thereby preventing their delivery to the wrong user. However, if the assumption is incorrect and bursty conditions have not arisen, it is unlikely that the next packet processed will have any errors. Accordingly, the system will

switch back to the normal ECC state to perform random error corrections, rather than bursty error corrections. (D.I. 551 at 36).

C. The Petr '087 Patent

The Petr '087 Patent relates to speech compression. Speech signals are typically transmitted in digital telephone systems via pulse code modulation (PCM). PCM is a standardized technology whereby analog signals are sampled at 8000 times per second and converted into pulses. These pulses are each represented by an 8-bit code. The result is a transmission rate equal to 64 kbits/sec. (D.I. 551 at 47.)

Adaptive Differential Pulse Code Modulation (ADPCM) is a method for compressing PCM signals, thereby reducing bandwidth and increasing efficiency. The Petr patent teaches an improved form of ADPCM. (D.I. 551 at 47.)

A typical ADPCM coder and decoder consists of a quantizer and a predictor, either or both of which are capable of changing in response to input signals. The predictor provides an estimate of the current signal based on previous signals. The estimate is then subtracted from the input signal to form a difference signal, which is smaller in magnitude than the original input signal. The difference signal is then quantized by the quantizer.

In the prior art, ADPCM systems worked well with "low speed"

speech signals, but were not effective at handling "high speed" signals like those produced by a fax or modem. Other systems had the opposite capabilities, working well with high speed signals, but not with low speed signals. The Petr Patent teaches a "dynamic locking quantizer" that is capable of two different adaptation speeds to handle the different types of signals. In addition, the Petr Patent teaches a means for determining the type of signal that is present and then transitioning between the two adaptation speeds in response to the signal. (D.I. 551 at 48.)

D. Arpin '136 Patent

The Arpin '136 Patent teaches a method and apparatus for automatically initializing circuit boards of a communication system. Communication systems often require manual configuration by the user of features performed by port circuit boards during initialization of the system. This manual configuration involves manually loading various parameters into the circuit boards and/or booting programs into the board, both of which require considerable time and effort. The Arpin '136 Patent discloses an apparatus and method aimed at reducing the time and effort involved in manual configuration by automating part of the configuration process. As described in the Arpin Patent:

[W]hen power is applied or in response to a reset signal, each circuit board systematically reports its identification type (ID) code to the system controller which then accesses options tables in memory using the

board ID code to obtain predetermined operating parameters which are sent to and which define one or more features to be performed to the associated circuit board.

('136 Patent, col. 1, ll. 40-47).

In addition to automating part of the configuration process, the Arpin Patent also teaches the replacement of a malfunctioning circuit while the system is still operating. The replacement circuit board is automatically initialized by the system using the stored operating parameters associated with the replaced circuit board. ('136 Patent, col. 1, ll. 50-56).

III. Claim Construction

The Court issued its claim construction rulings during the jury charge in this case. Given the circumstances at that time, the Court did not issue an opinion detailing the rationale for its construction rulings. Accordingly, the Court will herein reproduce its claim construction rulings with the rationale supporting the Court's conclusions.

A. Eckberg '810

1. Claim 12 of the '810 patent

Claim 12 of the Eckberg '810 Patent is directed to a method for monitoring the transmission rate of a user's packets into the network and marking those packets that are transmitted at an excessive rate. In full, with the disputed terms emphasized³,

³ As the Court instructed the jury, any other terms in this or the other patents-in-suit, that were disputed by the

Claim 12 provides:

A method for marking an excessive bandwidth packet in a packet-switching network, the method comprising the steps of:

- a. **accumulating a count of bytes of data arriving at a node per interval;**
- b. receiving a packet with a number of bytes of data;
- c. comparing the accumulated count of bytes of data arriving at the node per interval with a predetermined threshold;
- d. if the accumulated count is less than the threshold, **incrementing the count in the accumulator by a constant** plus the number of bytes of data in the received packet;
- e. if the accumulated count is greater than the threshold, marking the received packet; and
- f. subsequent to step d or e passing the unmarked or marked packet along in the node.

('810 Patent, col. 12, ll. 1-17). For the reasons that follow, the Court construes the disputed terms as follows:

- **"accumulating a count of bytes of data arriving at a node per interval"** is construed to mean maintaining a count of bytes that have arrived at a node over a period of time.

Newbridge contends that this term should be limited to a count

parties were construed according to their plain meanings. In other words, after reviewing the claim language itself and the specifications of the various patents-in-suit, the Court determined that these phrases were self-explanatory and no additional construction was needed. Accordingly, to the extent that the parties may have raised other phrases for construction in their Markman briefing, the Court has concluded that these phrases are appropriately construed using their plain meaning.

that maintains the total number of bytes arriving at a node. After reviewing the claim language and the specification, the Court concludes that there is nothing in the claim language or specification suggesting that a total count must be maintained. Rather, the claim language uses the article "a" before the word "count," suggesting that the count is not limited to a total number, but is kept open. In addition, the specification explains that the count is used to compare the traffic from a particular user's bandwidth against the user's subscribed bandwidth to determine whether the user is exceeding his or her subscription. ('810 Patent, col. 5, ll. 36-53, col. 6, ll. 10-20). To this effect, the count does not even accumulate all the bytes of data arriving at the node. Indeed, the count does not accumulate the bytes of data arriving in marked packets, because these packets are outside the traffic contract. ('810 Patent, col. 8, ll. 16-18). Thus, the bytes of data accumulated by the count described in step (a) of Claim 12 are akin to a subset of the data arriving at any given node, and not a total count. Accordingly, in the Court's view, its construction is consistent with the plain language of the claim and the Patent's specification.

- **"incrementing the count in the accumulator by a constant"** is construed to encompass a constant whose range is typically between 0 and 1000. Newbridge contends that the

constant referred to in this phrase must be a non-zero constant. After reviewing the claim language and the specification, the Court concludes that Newbridge's construction is contradicted by the specification which states that the constant can be a value between 0 and 1000. ('810 Patent, col. 7, ll. 12-21).

Accordingly, in the Court's view, its construction of this phrase is consistent with the express language of the specification.

2. Claim 21 of '810 Patent

Claim 21 of the '810 Patent is directed to a packet-switching node that includes an apparatus to monitor the transmission rate of the received packets and to mark those packets being transmitted at an excessive rate. In full, with the disputed terms highlighted, Claim 21 reads:

A packet-switching node with a **receive terminal**;

a channel interconnected with the receive terminal for transmitting packets of data at a selectable one of a plurality of transmission rates;

means for determining the rate at which a packet of data is being transmitted through the channel and generating a mark whenever the determined rate is an excessive rate; and

means for storing the mark with the packet of data.

('810 Patent, col. 16, ll. 20-28). For the reasons that follow, the Court construes the disputed terms as follows:

- "**receive terminal**" is construed to mean an input port of a packet switch. Newbridge contends that this term is indefinite, or to the extent that it was capable of construction,

should be defined as a customer terminal that receives data from a packet switch node. After reviewing the specification, the Court concludes that the specification refutes Newbridge's construction, because it indicates that the customer terminal equipment actually resides outside the network and is not co-located with a packet switch node. ('810 Patent, col. 4, ll. 38-56, Fig. 1). Further, the monitoring and marking described in this claim is not performed by customer terminal equipment, but rather, is performed at the packet-switching node. That the receive terminal is an input port is supported by the specification which describes that the data packet is "received by an access node." ('810 Patent, col. 3, ll. 57-60, col. 5, l. 67-col. 6, l. 1, 3). In addition, the Court's construction is supported by the meaning ascribed to the word "terminal" by those of ordinary skill in the art. Specifically, the word "terminal" is defined as "[a] point in a system or communication network at which data can either enter or leave." The New IEEE Standard Dictionary of Electrical And Electronics Terms 1351 (5th ed. 1993).

- "means for determining the rate at which a packet of data is being transmitted through the channel and generating a mark whenever the determined rate is an excessive rate" is a means-plus-function element. The function of this element is to determine the rate at which a packet of data is being transmitted

and to generate a mark when that rate is an excessive rate. The structure associated with this element is a logic circuit depicted in Figure 2 which executes the algorithms of Figures 3 and 8 along with the update algorithm of Figure 4. Both Lucent and Newbridge apparently agree on the function of this element as stated by the Court. (D.I. 568 at 12; D.I. 547 at 15). However, the parties disagree over the corresponding structure for this element. Specifically, Newbridge contends that this structure was missing from the specification. After reviewing the specification of the '811 Patent, the Court concludes that the specification describes in detail that the structures of the logic circuit and the algorithms of Figures 3, 8 and 4 correspond to the function described in this element. ('810 Patent, col. 6, ll. 10-26; col. 6, l. 34-col.8, l. 41, col. 9, l. 60-col. 10, l. 41).

B. Eckberg '811

1. Claim 10 of the '811 patent

Claim 10 of the '811 Patent is directed to a method for dropping a data packet in a node of a packet-switching network. In full, with the disputed terms highlighted, Claim 10 of the '811 Patent reads:

A method for dropping a data packet to be transmitted from a switch node in a packet switching network, the method comprising the steps of:

- a. **preparing to transmit the data packet;**

- b. **determining whether or not the data packet is marked as being transmitted at an excessive rate;**
- c. **evaluating congestion at the switch node;**
- d. determining whether or not the congestion is at or above a predetermined value; and
- e. if the data packet is marked as being transmitted at an excessive rate and the congestion is at or above the predetermined value, dropping the data packet before it is transmitted from the switch node.

('811 Patent, col. 14, ll. 1-13). For the reasons that follow, the Court construes the disputed terms as follows:

-“preparing to transmit the data packet” is construed to mean accessing the header of a packet to make a decision on where to send the packet and to obtain the marking field. Newbridge contends that this phrase should be defined to mean “that the data packet is at the transmit side of a buffer and is being made ready for sending to its next destination.” (D.I. 547 at 20). In other words, Newbridge’s proposed construction would limit this phrase to “output dropping” which is dropping performed on the output side of the buffer. After reviewing the claim language and the specification, the Court concludes that Newbridge’s construction would exclude the preferred embodiment, because the preferred embodiment drops packets before they are placed in a buffer. The Court’s construction of this phrase is supported by the specification, which explains:

[T]he packet proceeds through the access node 20 of FIG. 1 to an output controller before being put into an

output buffer associated with the output link, through which the packet is to be transmitted. At that time, the information in the packet header field, reserved for the marking signal, is forwarded to a packet dropping logic circuit 53 . . ."

('811 Patent, col. 8, ll. 40-49) (emphasis added).

- **"determining whether or not the data packet is marked as being transmitted at an excessive rate"** is construed to mean determining whether the packet is marked in a network environment where marking is being performed to designate those packets that are transmitted at excessive rates. According to Newbridge, this phrase should be construed to require the claimed dropping method to be able to conclude from the marking information why the packet was marked. After reviewing the specification of the '811 Patent, the Court concludes that Newbridge's construction would exclude the preferred embodiment, which merely checks to see if the packet is marked without engaging in additional processes to determine the reason for the marking. The Court's construction is also supported by the specification which explains that marking can occur as a result of a special service where all of a customer's packets are marked. These special service packets are treated like other marked packets, which indicates that the dropping function described in the specification does not determine the reason for marking. ('811 Patent, col. 10, ll. 62-64). Accordingly, the Court's construction of this phrase embraces the Patent's preferred embodiment and is consistent with

the specification.

- **"evaluating congestion at the switch node"** is construed to mean evaluating congestion anywhere within the switch node. According to Newbridge, a construction of this phrase "requires a determination of the congestion at the point in the switch node at which the dropping decision will be made on a data packet which has been prepared for transmission from the switch node." (D.I. 547 at 25). After reviewing the claim language and the specification, the Court concludes that the phrase is not limited in the manner in which Newbridge suggests. The phrase "at the switch node" indicates that this evaluation takes place at the switch node, but does not require that the evaluation be at a specific point at the switch node. Moreover, the specification suggests that there are nodes with multiple queuing points such that independent congestion evaluations at multiple buffers within the node are not excluded. ('811 Patent, col. 1, ll. 53-61). Accordingly, the Court declines to limit the phrase in the manner suggested by Newbridge.

2. Claim 12 of the '811 Patent

Claim 12 of the '811 Patent is also directed to a method for dropping a data packet in a node of a packet-switching network; however, Claim 12 also includes steps directed to the marking of the packets. In full, with the disputed terms highlighted, Claim 12 of the '811 Patents provides:

A method for dropping a data packet to be transmitted from a switch node in a packet switching network, the method comprising the steps of:

- a. segregating data packets transmitted by one customer into the network;
- b. **marking that one customer's data packets as being transmitted into the network at an excessive rate;**
- c. **preparing to transmit one of that customer's data packets;**
- d. determining whether or not the one data packet is marked;
- e. **evaluating congestion at an output of the switch node;**
- f. determining whether or not congestion at the switch node is at or above a predetermined value; and
- g. if the one data packet is marked as being transmitted at an excessive rate and the congestion at the switch node is at or above the predetermined value, dropping the packet.

('811 Patent, col. 14, ll. 24-43). For the reasons that follow, the Court construes the disputed terms as follows:

- **"marking that one customer's data packets as being transmitted into the network at an excessive rate"** is construed to mean monitoring the transmission of a customer's data packets and marking those packets that are being transmitted at an excessive rate. Newbridge contends that this phrase should be construed to require the switching node to mark "all packets received by the switching node as if they were being transmitted at an excessive rate." (D.I. 547 at 30). In other words, "the

marking is done regardless of whether the received packet is actually being transmitted at an excessive rate." (D.I. 547 at 30). After reviewing the express language of the claim and the specification, the Court disagrees with Newbridge's proposed construction. Newbridge's construction corresponds to the "special service" marking described in the specification of the '811 Patent, in which all of a customer's packets are marked prior to transmission. However, this section of the specification does not refer to marking packets transmitted at an excessive rate, a requirement expressed in the plain language of the claim. In addition, the Court's construction is supported by the specification which discloses a congestion control scheme "directed toward monitoring and marking selected customer data packets and eliminating or dropping from further transmission through the network marked data packets whenever and wherever they encounter a congestion condition. ('811 Patent, col. 5, ll. 37-41) (emphasis added). Further, the specification explains that the packets are selected for marking by "monitoring the bandwidth of a customer and . . . marking that customer's packets when the customer's subscribed bandwidth is exceeded." ("811 Patent, col. 5, ll. 54-57). This "monitoring is accomplished by an algorithm which determines whether or not the individual customer . . . is transmitting at an excessive rate." ('811 Patent, col. 6, ll. 21-24) (emphasis added). Accordingly, the

Court's construction is consistent with the plain language of Claim 12 and the '811 Patent's specification.

- **"preparing to transmit one of that customer's data packets"** is construed to mean accessing the header of a packet to make a decision on where to send the packet and to obtain the marking field. The Court's rationale for the construction of this phrase is the same as that set forth in the context of the similar phrase in Claim 10 of the Eckberg '811 Patent.

- **"evaluating congestion at an output of the switch node"** is construed to mean evaluating congestion anywhere within the output of the switch node. The Court's rationale for the construction of this phrase is the same as that set forth in the context of the similar phrase in Claim 10 of the Eckberg '811 Patent.

C. Cheng '174

1. Claim 8 of the '174 patent

In full, with the disputed terms highlighted, Claim 8 of the '174 Patent provides:

Apparatus for receiving input digital data coded using an error correction code, said apparatus comprising

error correcting circuit (ECC) means for detecting one or more errors and for correcting a single-bit error in the received data using said error correction code,

error detecting circuit (EDC) means for detecting one or more errors in the received data using said error correction code,

means for deriving an error signal in a predetermined manner from said received data, and

switch means responsive to the absence of an error signal received from said deriving means for switching the detecting of said received data from said EDC means to said ECC means and responsive to the presence of said error signal for switching the detecting of said received data from said ECC means to said EDC means.

('174 Patent, col. 12, ll. 7-25). For the following reasons, the Court construed the disputed terms as follows.

- **"error correcting circuit (ECC) means for detecting one or more errors and for correcting a single-bit error in the received data using said error correction code"** is a means plus function element. The function of this element is to detect one or more errors and correct a single-bit error using the correction code. The structure associated with this element is a syndrome circuit 700, remainder list and comparison circuit 803, and received word store and correct circuit 805 of Figure 8. For the most part, the parties agree with the function of this element as stated by the Court⁴; however, the parties disagree with the corresponding structures identified by the Court. Specifically, Newbridge contends that the only possible

⁴ Newbridge's proposed function for this element is "[t]o detect one or more errors and to correct single bit errors." The Court's construction, though similar is more accurate, because it takes into account the complete language of the element. Specifically, the Court's claim construction acknowledges that the correcting is done using the "error correction code" as expressly stated in the claim language.

corresponding structure to this claim language is element 107 of Figure 1 of the Cheng '174 Patent. After reviewing the specification of the Cheng Patent, the Court concludes that Figure 1 is a functional diagram of the invention which does not show a specific embodiment of the invention. ('174 Patent, col. 2, ll. 31-33; col. 3, ll. 37-40). In contrast, the specification explains that the specific embodiment is depicted in Figure 8. ('174 Patent, col. 7, ll. 14-16). Explaining Figure 8 in more detail, the specification indicates that the specific structures associated with the decoder that performs the function contemplated by this element is the syndrome circuit 700, remainder list and comparison circuit 803 and received word store and correct circuit 805. ('174 Patent, col. 7, ll. 16-20, 21-24). Accordingly, the Court's claim construction is consistent with the specification and the specific embodiment of the invention.

- **"error detecting circuit (EDC) means for detecting one or more errors in the received data using said error correction code"** is a means-plus-function element. The function of this element is to detect one or more errors using the same error correction code used by the ECC. The structure associated with this element is the same syndrome circuit used by the ECC. As with the previous element, the parties' dispute centers on the structures associated with this element. Again, Newbridge

advances an element of Figure 1 of the Cheng Patent, specifically element 108 of Figure 1, as the corresponding structure. For the reasons discussed in the context of the previous element, the Court disagrees with the reference to Figure 1. The specification again indicates that the specific embodiment associated with this element is shown in Figure 8. Further, the specification expressly states that "the EDC (108 of FIG. 1) includes the syndrome circuit 700," i.e. the same syndrome circuit associated with the ECC means. Because the specification actually states the structures comprising the illustrative depiction of element 108 in Figure 1, the Court declines to accept what is essentially a more general reference to Figure 1.

- **"means for deriving an error signal"** is a means-plus-function element. The function of this element is to derive an error signal. The structure associated with this element is the syndrome circuit. The Court's ruling concerning the function of this element is consistent with the plain language of the element and thus, needs no further explanation. With regard to the structure associated with this element, the parties' dispute is essentially similar to the dispute regarding the structures of the previous elements. Newbridge contends that the syndrome circuit used in the ECC and EDC circuits shown in Figure 1 is the correct structure. Lucent contends that the corresponding element is not multiple syndrome circuits, but only one syndrome

circuit, because the same syndrome circuit is used for both the ECC and EDC means. For the reasons discussed previously, the Court disagrees that Figure 1 is the appropriate depiction of the structure associated with this element. Further, as discussed previously, the Court has concluded that the same syndrome circuit is used for the ECC and EDC means. Accordingly, the Court rejects a proposed structure that would refer to multiple syndrome circuits.

- **"switch means responsive to the absence of an error signal received from said deriving means for switching the detecting of said received data from said EDC means to said ECC means"** is a means-plus-function element. The function of this element is to switch to and from the detecting of errors in the ECC means and the detecting of errors in the EDC means. The structure associated with this element is control unit 810 of Figure 8. Newbridge contends that the function associated with this element is "[t]o control the routing of data to the inputs of the ECC and EDC circuits." (D.I. 569 at 20). After reviewing the claim language and the specification, the Court concludes first, that Claim 8 expressly states that the "switch means" is "for switching the detecting of said received data," not the data itself. Further, the language of Claim 13 expressly provides for "gating" or routing to different means. Claim 8 does not contain such similar language and to read Claim 8 to include such

language would undermine that which is claimed in Claim 13. In addition to the claim language, the Court notes that its construction is supported by the specification. ('174 Patent, col. 7, ll. 28-30). Indeed, Newbridge's proposed function for this element rests on the presumption that the EDC and ECC circuits are separate such that routing to and from the EDC and ECC means is required. However, as discussed in the context of the Court's claim construction for the EDC and ECC means, the syndrome circuit 700 is part of both the ECC and EDC means, and therefore, such routing is not required.

As for the structure associated with this function, Newbridge again directs the Court to an element depicted in Figure 1, specifically, switch 110. For the reasons discussed previously, the Court does not accept a reference to Figure 1 as providing an accurate description of the corresponding structures. Rather, the Court is persuaded by the fact that the specification specifically states that "[t]he control block and switch functionally shown as 109 and 110, respectively, in FIG. 1 are embodied in control unit 810 in FIG. 8." ('174 Patent, col. 7, ll. 36-38). In the Court's view, its identification of control unit 810 as the corresponding structure is consistent with the specific embodiment of the '174 Patent.

2. Claim 9 and Claim 16 of the '174 patent

Because Claim 9 and 16 of the Cheng '174 Patent are

dependent on Claim 8, the Court concludes that they should be read in a manner consistent with Claim 8. Accordingly, the rationale and constructions set forth with respect to Claim 8 apply equally with respect to Claim 9 and Claim 16 of the '174 Patent.

D. Petr '087

1. Claim 1 of the '087 Patent

Claim 1 of the '087 Patent is directed to an ADPCM encoder.

In full, with the disputed terms highlighted, Claim 1 of the '087 Patent reads:

A coder (100) for converting a linear input signal representative of encoded speech, voiceband data or tone signals into a quantized differential PCM output signal, the input signal being coupled to the input of a difference circuit (11) along with a signal estimate of said input signal to obtain a difference signal indicative of the difference therebetween, a **predictor means** (12) for producing said signal estimate, an **adaptive quantizing means** (DLQ) for receiving said difference signal and providing at its output a quantized version of the difference signal, and means (17) for adding said quantized version of the difference signal with said signal estimate and coupling the sum to the input of said predictor means,

said adaptive quantizing means being characterized by,

means (FIG. 2) for dynamically controlling said adaptive quantizing means speed of adaption including, means for producing a fast speed of adaptation when the input signal represents speech signals and a slow speed of adaptation when the input signal represents encoded voiceband data or tone signals.

('087 Patent, col. 8, l. 49-col. 9, l. 3). The Court construes, for the reasons stated, the disputed terms as follows:

- **"predictor means"** is a means-plus-function element.

The function of this element is to produce a signal estimate of an input signal to obtain a signal indicative of the difference between a linear input signal and a quantized differential PCM output signal. The structure associated with this function is a

four-pole adaptive predictor as well as alternative predictor structures incorporated by reference into the Patent. Lucent contends that the function of this element is to provide an estimate of the current signal value based on past values. After reviewing the claim language, the Court concludes that its construction is more appropriate, because it is derived from the express language of the claim, which defines "said signal estimate."

As for the corresponding structure, Newbridge directs the Court to Figure 4. The specification, however, indicates that Newbridge is only partially correct. According to the express language of the specification, the corresponding structure consists of an example four-pole adaptive predictor as well as alternative predictor structures disclosed in the Gibson article incorporated by reference into the Patent. ('087 Patent, col. 6, 1.9-col.7, 1.17). Accordingly, the Court is persuaded that its claim construction is consistent with the specification.

- **"adaptive quantizing means"** is a means-plus-function element. The function of this element is to receive the difference signal and output a quantized version of said difference signal. The structure associated with this function is depicted in Figure 1 of the patent and consists of the quantizer, inverse quantizer, and Q adaptation circuit. In construing this term, the Court has concluded that the adaptive

quantizing means is not limited to the 4-bit system described in the Patent. The parties essentially agree on the function of this element as construed by the Court; however, the parties disagree as to the structure associated with this function. Specifically, Newbridge contends that the adaptive quantizing means is limited to the 4-bit system described in the preferred embodiment. However, the specification expressly states that "the invention is in no way limited to any particular non-uniform quantizer; in fact, some applications could call for a uniform quantizer." ('087 Patent, col. 8, ll. 26-28). Further, the specification describes a 4-bit system as an example, but expressly foresees other possible values. ('087 Patent, col. 2, l. 51-54). Given the express language of the specification, the Court declines to limit the invention to the preferred embodiment.

- The paragraph beginning ... **"means (FIG. 2) for dynamically controlling"** is a means-plus-function element. The function of this element is to control the adaptation of the quantizer such that there is a fast speed of adaptation where the input signal represents speech signals and a slow speed of adaptation when the input signal represents encoded voiceband data or tone signals. The structure associated with this function is depicted in Figures 2, 3, and 5 and described in the specification at Column 4, line 20 to Column 6, line 8.

Newbridge contends that the function of this element is "[d]ynamically controlling DLQ's speed of quantizing." However, the Court is persuaded that its construction is more complete in that it takes into account the full language of the claim, thereby explaining what the "dynamically controlling" phrase actually means. In addition, the Court's description of the function of this element is consistent with the specification. ('087 Patent, col. 5, ll. 52-59).

As for the structure corresponding to this function, the parties agree that Figure 2 is involved; however, Lucent also contends that Figures 3 and 5 are involved, as described in col. 4, l. 20-col. 6, l. 8. After reviewing the specification, the Court agrees with Lucent, because its proposal more fully considers the details set forth in the specification.

2. Claim 8 of the '087 Patent

Claim 8 of the '087 Patent is directed to an ADPCM decoder. In full, with the disputed language highlighted, Claim 8 provides:

A decoder (101) for converting a quantized n-bit differential PCM input signal (I') representative of encoded speech, voiceband data or tone signals into a linear output signal (r') comprising inverse adaptive quantizer means (115) for receiving said input signal and providing at its output a quantized version of the original difference signal that was encoded into said n-bit differential PCM signal, said decoder being characterized by, **means (116) coupled to the input and to the output of said inverse adaptive quantizer means for dynamically controlling the adaptive inverse quantizer means** to achieve a fast speed of adaptation

when the differential PCM input signal represents speech signals and a slow speed of adaptation when the differential PCM input signal represents voiceband data or tone signals.

(‘087 Patent, col. 9, ll. 20-35). For the reasons that follow, the Court construes the disputed terms as follows.

- “**means (116) coupled to the input and to the output of said inverse adaptive quantizer means and for dynamically controlling the adaptive inverse quantizer means**” should be construed consistently with the similar language found in Claim 1 of the Patent. Accordingly, the Court’s rationale discussed in the context of Claim 1 applies equally with respect to Claim 8 of the ‘087 Patent.

E. Arpin ‘136

1. Claim 1 of the ‘136 patent

Claim 1 of the Arpin ‘136 Patent is directed to an apparatus for configuring port circuits in a communication system. In full, with the disputed terms highlighted, Claim 1 provides:

A **communication system** comprising a controller **connected** to one or more port circuits for providing communications between trunks and lines connected to said one or more port circuits, said system further comprising:

feature defining means at each of said port circuits for storing operating parameters defining a plurality of features which can be performed thereat, and

reporting means at each of said port circuits responsive to a predetermined status condition thereat for reporting its identification type code to said controller and

said controller including

memory means for storing predetermined operating parameters defining one of said plurality of features to be performed at each type of said port circuits connected to said system and

means connected to said memory means and responsive to the receipt of said type code from each reporting port circuit for accessing said memory means using said type code and for sending predetermined operating parameters to said each reporting port circuit thereby defining one of said plurality of features to be performed thereat.

('136 Patent, col. 10, ll. 4-27). For the reasons discussed, the Court construes the disputed terms as follows.

- **"communication system"** is construed to mean a system for communicating information. The Court's construction of this phrase is consistent with its plain meaning. Accordingly, further explanation for the Court's construction is not required.

- **"connected"** is construed to mean to join. Newbridge proposes a construction of the term "connected" which limits the term to mean "electrically connected," i.e. "jointed together in a manner that allows electrical signals to flow between the components." (D.I. 547 at 48). After reviewing the specification, the Court concludes that the specification refers to both electrical and physical connections, and therefore, the Court declines to limit the term "connect" to a definition with only electrical implications. ('136 Patent, FIG. 1, col. 10, ll. 6-7 (describing connection of physical cables, trunks and lines);

col. 10, ll. 4-5 (describing "electrical connection" between controller and port circuits). Accordingly, the Court concludes that the construction of the term "connected" should be given its ordinary, plain meaning.

- **"feature defining means at each of said port circuits for storing operating parameters defining a plurality of features which can be performed thereat"** is a means-plus-function element. The function of this element is to store operating parameters defining a plurality of features which can be performed thereat. The structure associated with this function is a memory, such as Random Access Memory (RAM). The phrase "at each of said port circuits" does not require that each port circuit have its own separate feature defining means. The term "features" refers to user-selectable functions.

The parties agree to the function of this element as construed by the Court. (D.I. 568 at 42). However, the parties' disagree as to the structure corresponding to this function. Newbridge contends that no structure is clearly identified in the Patent, rendering the claim indefinite. On the other hand, Lucent contends that the structure is "memory, such as random access memory (RAM)." (D.I. 568 at 42). After reviewing the Patent's specification, the Court agrees with Lucent. Indeed, the specification expressly states that the storage of the operating parameters contemplated by this element is in such

memory as RAM memory. ('136 Patent, col. 3, ll. 14-20, 6-9).

With regard to the phrase "at each of said port circuits," Newbridge contends that this phrase requires each of the port circuits to have its own separate defining means. After reviewing the specification, the Court concludes that this construction is not supported by the Patent. Specifically, the specification and the preferred embodiment of the invention shows and describes port boards having multiple port circuits and a single memory at the port circuits for storing operating parameters. ('136 Patent, col. 3, ll. 18-20, 36-38).

With regard to the term "features," the Court concludes that this refers to "user-selectable functions." Newbridge contends that this term is not limited to user-selectable functions. After reviewing the specification, the Court concludes that its definition of the term "features" is consistent with the specification and the purpose of the '136 patent, i.e. to reduce or eliminate the amount of user selection of features that must be performed when a communication system is initialized or reset. ('136 Patent, col. 4, ll. 50-54, col. 5, ll. 57-61).

- **"reporting means at each of said port circuits"** is a means-plus-function element. The function of this element is reporting. The structure associated with this element is a port microprocessor 205 for providing the identification type code to the controller and associated memory for storing the

identification type code. The phrase "at each of said port circuits" does not require that each port circuit have its own separate reporting means.

The parties appear to agree with the Court's construction of the function of this element. (D.I. 568 at 44). However, the parties' primary dispute again centers on the structures corresponding to this function. Newbridge contends that the structure for this element is not clearly identified in the specification. On the other hand, Lucent identifies the port microprocessor 205 as the corresponding structure. After reviewing the specification in light of the language of the claim, the Court agrees with Lucent. Specifically, the specification explains:

[W]hen port board 200 receives a reset message from CPU 101, reset circuit 210 causes port microprocessor 205 to initialize and send a report to CPU 101 identifying the model type or ID code of port board 200. As will be discussed in a later paragraph, CPU 101, in response to a report from a port board, sends predetermined default operating parameters to the reporting port board. The port microprocessor 205 utilizes the operating parameters to set up particular communication characteristics for the port circuits.

('136 Patent, col. 3, ll. 58-67) (emphasis added).

- "memory means for storing predetermined operating parameters defining one of said plurality of features to be performed at each type of said port circuits connected to said system" is a means-plus-function element. The function of this element is storing predetermined operating parameters. The

structure associated with this element is memory associated either internally or externally with central call processor unit 101.

The parties agree with the Court's construction of the function of this element. However, the parties' disagreement centers on the structures identified with this function. Newbridge contends that the structures are not clearly identified in the patent, rendering the claim indefinite. Lucent contends that the structure associated with this function is the memory associated with central processor unit 101. After reviewing the specification, the Court finds that the specification explains that the central call processing unit 101 stores the operating parameters that correspond to the features to be performed at the port circuits. When the system is configured, the controller accesses this information in order to retrieve the operating parameters, which are then sent to the appropriate port circuits. ('136 Patent, col. 2, ll. 18-22, 48-52). Accordingly, the Court concludes that its construction is consistent with the Patent's specification.

- "means connected to said memory means and responsive to the receipt of said type code from each reporting port circuit for accessing said memory means using said type code and for sending predetermined operating parameters to said each reporting port circuit thereby defining one of said plurality of features

to be performed ther[e]at" is a means-plus-function element. Originally, the Court construed the function of this element as accessing the memory means and sending predetermined operating parameters. The Court also identified the structure associated with this element as the microprocessor associated with the central call processor unit 101, which executes programs to perform the accessing and the sending of the operating parameter.

The Court's construction of this element, however, requires clarification. Specifically, the Court's construction of this element should have been "accessing the memory means using said type code and sending predetermined operating parameters." (emphasis added). This construction is consistent with the plain language of the claim, and with the constructions proposed by both parties. (D.I. 568 at 46; D.I. 547 at 55).

Primarily the parties' dispute again centers of the question of identifying the corresponding structures associated with the function of this claim element. Newbridge contends that the structure is not clearly identified in the specification, rendering the claim invalid as indefinite. Lucent contends that the corresponding structure is the central call processor unit 101 in Figure 1. After reviewing the specification, the Court agrees with Lucent. The specification explains:

More particularly, when power is applied or in response to a reset signal, each circuit board systematically reports its identification type (ID) code to the system controller which then accesses option tables in memory

using the board ID code to obtain predetermined operating parameters which are sent to and which define one or more features to be performed at the associated circuit board.

('136 Patent, col. 1, ll. 40-47).

* * *

The system controller includes a central call processor unit (CPU) 101, which connects over a processor bus 102 to read-only memory (ROM) 103.

('136 Patent, col. 2, ll. 18-20).

* * *

As will be discussed in a later paragraph, CPU 101, in response to a report from a port board, sends predetermined default operating parameters to the reporting port board.

('136 Patent, col. 3, ll. 62-65). Accordingly, the Court's construction of this element is consistent with language of the Claim and the specification of the Patent.

2. Claim 4 of the '136 Patent

Because Claim 4 did not contain any separately disputed terms, the Court did not construe any additional elements with respect to Claim 4. Accordingly, Claim 4 should be construed consistently with its dependent claim, Claim 1.

3. Claim 10 of the '136 patent

In full, with the disputed term highlighted, Claim 10 provides:

A method of **self-initializing** a communication system comprising a controller connected to one or more port circuits for providing communications between trunks and lines connected to said one or more port circuits,

said method comprising:

storing in a system memory predetermined operating parameters according to port circuit type code, said predetermined operating parameters defining a plurality of features which can be performed by each port circuit in the system;

reporting to said controller when a predetermined status condition exists at a port circuit, said report specifying the type code of said reporting circuit; controller accessing of said system memory to obtain the stored predetermined operating parameters using said reporting port circuit type code specified in said reporting step;

sending said predetermined operating parameters from said controller to said reporting port circuit; and receiving and storing said predetermined operating parameters defining one of said plurality of features to be performed by said reporting port circuits.

('136 Patent, col. 12, ll. 1-24). For the following reasons, the Court construes the disputed term as follows.

- **"self initializing"** is construed to allow human intervention. Newbridge contends that this phrase should be construed to mean that "the communication system automatically initializes port circuits without human intervention," including working through a keyboard. After reviewing the specification of the '136 Patent, however, the Court disagrees with Newbridge. Indeed, the specification contemplates that type of human intervention which Newbridge seeks to exclude. Specifically, the specification provides: "The CAU also enables a customer to manually input or change the operating parameters of the system ports." ('136 Patent, col. 2, ll. 24-26). A CAU is a customer

access unit, such as a keyboard.

DISCUSSION

I. Newbridge's Renewed Motion for Judgment as a Matter of Law

A. Legal Standard For Judgment As A Matter Of Law

To prevail on a renewed motion for judgment as a matter of law following a jury trial, the moving party "must show that the jury's findings, presumed or express are not supported by substantial evidence or, if they were, that the legal conclusions implied [by] the jury's verdict cannot in law be supported by those findings.'" Pannu v. Iolab Corp., 155 F.3d 1344, 1348 (Fed. Cir. 1998) (quoting Perkin-Elmer Corp. v. Computervision Corp., 732 F.2d 888, 893 (Fed. Cir. 1984)). In assessing the sufficiency of the evidence, the court must give the non-moving party, "as [the] verdict winner, the benefit of all logical inferences that could be drawn from the evidence presented, resolve all conflicts in the evidence in his favor, and in general, view the record in the light most favorable to him." Williamson v. Consolidated Rail Corp., 926 F.2d 1344, 1348 (3d Cir.), reh'g en banc denied, 1991 U.S. App. LEXIS 16758 (3d Cir. 1991); Perkin-Elmer Corp., 732 F.2d at 893. In sum, the court must determine whether the evidence reasonably supports the jury's verdict. See Dawn Equip. Co. v. Kentucky Farms, Inc., 140

F.3d 1009, 1014 (Fed. Cir. 1998); 9A Wright & Miller, Federal Practice & Procedure § 2524 at 249-266 (3d ed. 1995) ("The question is not whether there is literally no evidence supporting the party against whom the motion is directed, but whether there is evidence upon which the jury properly could find a verdict for that party.")

B. Whether Newbridge Is Entitled To A Judgment Of Noninfringement As A Matter Of Law Regarding Claim 12 of the Eckberg '810 Patent Under The Doctrine Of Equivalents

The jury returned a verdict in favor of Lucent on its claim that Newbridge induced infringement by its customers of Claim 12 of the Eckberg '810 patent under the doctrine of equivalents. By its Renewed Motion For Judgment As A Matter Of Law, Newbridge raises five challenges to the jury's finding. Specifically, Newbridge contends that (1) the opinion of Lucent's expert, Dr. Guerin, was not based on the Court's claim construction of claim 12, and therefore his opinion does not constitute substantial evidence to support the jury's verdict; (2) Dr. Guerin's analysis ignored the "incrementing the count . . . by a constant" element of claim 12; (3) Lucent failed to present particularized testimony and linking arguments as required to support a finding of infringement under the doctrine of equivalents; (4) because there is no substantial evidence of direct infringement of claim 12 by Newbridge, there can be no finding of inducement to infringe by Newbridge; and (5) Lucent failed to perform a

hypothetical claim analysis. The Court will address each of Newbridge's arguments in turn.

1. Whether Dr. Guerin's opinion was based on the Court's construction of Claim 12

In arguing that Dr. Guerin's opinion was not based on the application of the Court's claim construction as it relates to Claim 12, Newbridge focuses on the phrase "accumulating a count of bytes of data arriving at a node per interval." ('810 Patent, col. 14, ll. 12-13). Newbridge points out that the Court construed the phrase "accumulating a count of bytes of data arriving at a node per interval" to mean "maintaining a count of bytes that have arrived at a node over a period of time." (D.I. 602 at 18). However, Newbridge contends that Dr. Guerin did not apply this construction in his testimony. Instead, Newbridge contends that Dr. Guerin interpreted the phrase to mean "keeping track as time evolves of how much we have sent above and beyond what we're entitled to." (D.I. 628 at 9). In support of its position, Newbridge cites numerous sections of the trial transcript and a portion of Dr. Guerin's expert report.⁵

After reviewing the testimony of Dr. Guerin as it relates to this element of Claim 12, the Court concludes that Dr. Guerin's testimony was consistent with the Court's claim construction.

⁵ Dr. Guerin's expert report was not admitted into evidence or otherwise considered by the jury.

During his testimony, Dr. Guerin discussed the "accumulating a count" element using Plaintiff's Exhibit No. 3161 as a demonstrative. Exhibit No. 3161 breaks down Claim 12 of the Eckberg '810 patent into various color codes, one color for each listed element, lettered (a) through (f). The "accumulating a count" element is found in step (a), and Dr. Guerin refers to it at various times as the "first step," "Step A," or by its color on the demonstrative, gray. With regard to this element, Dr. Guerin testified as follows:

So the first step in Claim 12 is essentially talking about keeping track of how much you're sending over time because rate is, again, keeping track of how much you're sending over some amount of time.

* * *

So what Step A corresponds to is keeping track of how much you've sent over time. So that's what we're trying to do accumulating the amount of bytes, so we're accumulating the amount of data that is being sent arriving at a node interval.

(Tr. at 397-398). Based on this testimony, the Court finds that Dr. Guerin applied the same construction adopted by the Court, i.e. maintaining a count of bytes that have arrived at a node over a period of time.

As for that portion of Dr. Guerin's testimony in which he discusses "keeping track as time evolves of how much we have sent above and beyond what we're entitled to," the Court concludes that Dr. Guerin's testimony was providing context to step (a) in view of the overall marking algorithm, not improperly

interpreting the claim. For example, Dr. Guerin was asked and responded as follows:

Q: Let's talk about the intervals of Step A and the intervals in the virtual scheduling algorithm. Were they identical?

A: No ... [w]hat we're trying to do here is keep track of how much faster you're sending than what you're entitled to. And so what the count that was described in this claim is that each time you get a packet through adding, like each time you write a check, adding to what you spent.

(Tr. at 417) (emphasis added). Thus, taken in context and in total, the Court concludes that Dr. Guerin's testimony was not at odds with the Court's claim construction.

2. Whether Dr. Guerin ignored the "incrementing the count ... by a constant" element in his claim construction analysis

Newbridge next contends that Dr. Guerin ignored the "incrementing the count in the accumulator by a constant" element in his claim construction analysis. Newbridge directs the Court to that portion of Dr. Guerin's testimony in which he states, "[i]f you don't have that kind of limitation you can just ignore that and make that zero." (Tr. at 403).

In its Answering Brief, Lucent contends that Newbridge's argument is a rehash of its claim construction argument that this requires the addition of a non-zero constant, also referred to as "k." (D.I. 645 at 6.) Lucent contends that the Court rejected Newbridge's construction when the Court construed the phrase "incrementing the count in the accumulator by a constant" to

encompass a constant whose range is typically between 0 and 1000.

In response to Lucent's position, Newbridge contends that the Court's construction requires a non-zero constant, because a range between 0 and 1000 does not include 0 or 1000. (D.I. 656 at 8). Thus, Newbridge reiterates its position that Dr. Guerin ignored this limitation in his claim construction analysis by "mak[ing] that zero." (Tr. at 403).

In its claim construction, the Court expressly stated that the range is "typically" between 0 and 1000. The Court's use of the term "typically" indicates that although the 0 to 1000 range for the constant is the ordinary case, it is not always the case. Thus, in the Court's view, Dr. Guerin did not ignore the Court's claim construction in his testimony relating to Claim 12 of the Eckberg '810 Patent.

3. Whether Lucent's evidence satisfied the Lear Siegler standard of particularized testimony and linking argument

Both in its argument related to the constant element and in a separate argument directed at Claim 12 as a whole, Newbridge contends that Lucent failed to provide sufficient "particularized testimony and linking argument" to support the jury's finding of infringement under Claim 12. With respect to step (d) of claim 12, Newbridge contends that Dr. Guerin's testimony failed to explain how any of Newbridge's products increment the "count" by a constant of any value or have an equivalent means of imposing a

"penalty per packet."⁶ To this effect, Newbridge contends that Dr. Guerin failed to demonstrate that step (d) of Claim 12 is present either literally or equivalently in Newbridge's accused products. (D.I. 628 at 9-11).

With respect to the other elements in Claim 12, Newbridge further contends that Dr. Guerin's testimony was imprecise, generalized and conclusory. Accordingly, Newbridge contends that Lucent failed to establish infringement under the doctrine of equivalents.

In response to Newbridge's argument, Lucent contends that it presented its case of infringement under Claim 12 solely under the doctrine of equivalents theory. Thus, Lucent contends that all of the testimony and evidence related to this claim was directed to infringement under the doctrine of equivalents. To this effect, Lucent points out that the particularized testimony and linking argument requirement of Lear Siegler has never been used to vacate a jury verdict based on an "equivalents only" case.

Under the doctrine of equivalents, an accused device which does not literally infringe a patent, may still be found to infringe if the differences between the claimed invention and the accused device are "insubstantial." Warner-Jenkinson Co. v.

⁶ For simplicity, the Court will refer to the constant representing a byte penalty per packet as the "constant feature."

Hilton Davis Chem. Co., 520 U.S. 17 (1997). To prove infringement under the doctrine of equivalents, the Court of Appeals for the Federal Circuit has established specific evidentiary requirements, including the need to prove equivalency on a limitation by limitation basis and the need for particularized testimony and linking argument. Texas Instruments Incorporated v. Cypress Semiconductor Corporation, 90 F.3d 1558, 1566 (Fed. Cir. 1996); Lear Siegler, Inc. v. Sealy Mattress Co., 873 F.2d 1422 (Fed. Cir. 1989). Because the doctrine of equivalents is simple to articulate, but conceptually difficult to apply, these evidentiary requirements are particularly important so as to provide the fact-finder with a framework for making its decision. Texas Instruments 90 F.3d at 1567.

Generalized testimony as to the overall similarities between a patent's claims and an accused product or process is insufficient to establish infringement under the doctrine of equivalents. Rather, particularized testimony and linking argument as to the "insubstantiality of the differences" between the patented invention and the accused device or process must be presented to the fact-finder. Id. "The determination of whether the differences between the claimed invention and the accused device are insubstantial involves the question of whether 'the element of the accused device at issue performs substantially the same function in substantially the same way, to achieve substantially

the same result, as the limitation at issue in the claim.'"

LifeScan Inc. v. Home Diagnostics, Inc., 103 F. Supp.2d 345, 359

(D. Del. 2000) (quoting Dawn Equip. Co. v. Kentucky Farms, Inc.,

140 F.3d 1009, 1016 (Fed. Cir. 1998)). Although the

function/way/result inquiry is not the sole "test for

equivalency" and the testimony and evidence need not conform to

this "test" linguistically, the testimony and evidence must still

address (1) whether the accused product or process contains each

element of the claimed invention, identically or equivalently,

and (2) whether any differences between the claimed invention and

accused product are insubstantial. Id. (citations omitted).

Reviewing the testimony of Dr. Guerin, the Court concludes

that Dr. Guerin's testimony was sufficient to satisfy the Lear

Siegler requirement of particularized testimony. Dr. Guerin

explained each element of Claim 12 of the Eckberg '810 Patent,

and thoroughly explained how each element was present by

equivalents in the accused products and opined that any

differences between the patented invention and the accused device

were insubstantial. (Tr. 423-424, 441-443, 453-454). In

addition to the testimony of Dr. Guerin, Lucent introduced

documentary evidence demonstrating that those skilled in the art,

including Newbridge, considered the claimed steps to be

equivalent to the steps performed by Newbridge's accused

products. Newbridge contends that Lucent improperly emphasized

the lay use of the word "equivalent" in these documents to suggest equivalence within the meaning of the doctrine of equivalents. However, equivalence is a question of fact and the perspective of one skilled in the art is essential to providing the contours for applying the doctrine of equivalents. See Warner-Jenkinson Co., 520 U.S. at 37. Given the testimony of Dr. Guerin and the documentary evidence presented by Lucent, the Court cannot conclude that insufficient evidence supports the jury's finding of infringement under the doctrine of equivalents.

4. Whether Lucent presented substantial evidence demonstrating that Newbridge induced the infringement of Claim 12

Newbridge next contends that Lucent failed to establish sufficient evidence to support a finding that Newbridge induced its customers to infringe Claim 12 of the Eckberg '810 patent. Newbridge correctly points out that one cannot induce infringement of a patent claim if there is no direct infringement of the claim. However, Newbridge contends that Lucent failed to establish any evidence, circumstantial or otherwise, of direct infringement, because: (1) Lucent failed to provide testimony identifying the direct infringer(s); (2) the allegedly infringing features of the accused product are optional; and (3) the functionality is only enabled if the network provider establishes a specific type of connection.

The Court is not persuaded by Newbridge's argument. In

Moleculon Research Corp. v. CBS, Inc., 793 F.2d 1261, 1272 (Fed. Cir. 1986), the Federal Circuit concluded that evidence of extensive puzzle sales of a product capable of use to practice the patented method and dissemination of instructions teaching the patented method was sufficient evidence to show direct infringement. It would be unnecessary, impractical and very likely impossible for the Moleculon patentee to demonstrate with direct evidence that each puzzle was used in a way that directly infringed the patent and not, for example, as a paperweight or a bookend.⁷ Similarly, the Court will not require Lucent to introduce direct evidence of the final resting place of each item sold by Newbridge, where and how it is used, or whether it is employed in an infringing manner on Monday through Thursday, but not in the remainder of the week.

In this case, Lucent introduced evidence of sales of the accused products in the United States and distribution of product

⁷ Newbridge argues in another portion of its brief that Moleculon is inapposite because the puzzle in question was only intended for use as a puzzle, whereas the Newbridge products have various optional uses, some of which are without question noninfringing. In the Court's view, Newbridge's argument misses the point of circumstantial evidence. The wet umbrella leads to the inference that it is raining outside. If in fact the source of the water is a lawn sprinkler, then the party advancing the lawn sprinkler theory should introduce appropriate evidence. Similarly, evidence that a saw could be used to cut concrete in an infringing manner could be rebutted by evidence that the saw is never used for that "option." See Chiuminatta Concrete Concepts, Inc. v. Cardinal Indus., Inc., 145 F.3d 1303, 1311-12 (Fed. Cir. 1998).

manuals containing instructions on how to configure the products in an infringing manner. (Tr. at 533-35; PX 537; PX 1693). In the Court's view this is adequate circumstantial evidence that there was direct infringement. To require more than this type of evidentiary showing would allow the infringer a refuge few patentees could breach. See e.g. 5 Chisum on Patents, § 17.04[4][f] n.19-20.1 and accompanying text (Supp. 2000). Because the Court concludes that Lucent presented sufficient evidence of direct infringement by Newbridge customers, the Court likewise concludes that sufficient evidence support's the jury's finding of infringement by inducement.

5. Whether Lucent was required to perform a hypothetical claim analysis

Newbridge next contends that Lucent was required to perform a hypothetical claim analysis. In support of its argument, Newbridge relies on Jury Instruction § 3.10.1 which stated, "to find infringement under the doctrine of equivalents you must find that the patent owner has proven that he could have obtained from the Patent Office a hypothetical patent claim similar to the claim asserted, but broad enough to literally cover the accused product, or method." (D.I. 602 at 36).

The "hypothetical patent claim" methodology is useful in determining whether an asserted range of equivalents under the doctrine of equivalents is so broad that it would impermissibly ensnare the prior art. See Wilson Sporting Goods Co. v. David

Geoffrey & Assoc., 904 F.2d 677 (Fed. Cir. 1990). It is not the only way to determine the extent that the prior art constrains the range of equivalents and its use is not mandatory. See generally 5A Donald S. Chisum, Chisum on Patents, § 18.04[2][d][ii] (2000). In any event, Newbridge does not contend that the prior art constrains the doctrine of equivalents with respect to this claim, and therefore, Lucent was not required to perform a hypothetical claim analysis. Accordingly, the Court declines to credit Newbridge's argument that Lucent was required to perform a hypothetical claim analysis.

C. Whether Newbridge Is Entitled To A Judgment Of Noninfringement As A Matter Law Regarding Claim 21 of the Eckberg '810 Patent Under Literal Infringement

The jury returned a verdict in favor of Lucent on its claim that Newbridge literally infringed Claim 21 of the Eckberg '810 patent. By its Renewed Motion For Judgment As A Matter Of Law, Newbridge raises three challenges to the jury's finding. Specifically, Newbridge contends that (1) Dr. Guerin did not analyze the structure of the accused Newbridge products vis-a-vis the structure identified by the Court; (2) Lucent failed to present particularized testimony and linking argument; and (3) Lucent failed to present any evidence that there was infringing activity within the United States with respect to the accused Newbridge products. The Court will address each of Newbridge's arguments in turn.

1. Whether Dr. Guerin analyzed the structure of the accused Newbridge products vis-a-vis the structure identified by the Court

By its Motion, Newbridge contends that Dr. Guerin failed to base his opinions on the Court's construction of the third element of Claim 21 of the Eckberg '810 Patent. Accordingly, Newbridge contends that Dr. Guerin's opinion cannot be considered substantial evidence sufficient to support the jury's finding of infringement.

The third element of Claim 21 of the Eckberg '810 Patent requires a "means for determining the rate at which a packet of data is being transmitted through the channel and generating a mark whenever the determined rate is an excessive rate." ('810 Patent, col. 16, ll. 24-27). The Court construed this element as a means plus function element and stated

"[t]he function of this element is to determine the rate at which a packet of data is being transmitted and to generate a mark when that rate is an excessive rate. The structure associated with this element is a logic circuit depicted in Figure 2 which executes the algorithms of Figures 3 and 8 along with the update algorithm of Figure 4."

(D.I. 602 at 18).

Newbridge contends that Dr. Guerin failed to discuss the logic circuit depicted in Figure 2, the algorithm of Figure 8 or the update algorithm of Figure 4 in the context of the accused products. Newbridge further contends that Dr. Guerin failed to demonstrate that the accused structure is equivalent to that

disclosed in the patent and that the function is identical.

After reviewing the relevant portions of Dr. Guerin's testimony, it is evident to the Court, that Dr. Guerin addressed Figures 3, 4 and 8 in his testimony. (Tr. 3550-3551). Although Dr. Guerin did not use the terminology "Figure 4," he spoke of Figure 4 in his testimony regarding "this update" in the context of explaining Plaintiff's Demonstrative Exhibit 3161 which contained a depiction of Figure 4. (Tr. at 3550). Accordingly, the Court concludes that Newbridge has not demonstrated that Dr. Guerin did not base his opinion on the Court's claim construction.

As for Newbridge's argument that Dr. Guerin failed to compare the patented structure with the structure in the accused products, the Court likewise concludes that Newbridge has not proven its contention. It is important to remember that the relevant structure here is a logic circuit executing algorithms. An algorithm is a procedure for solving a mathematical problem. Thus, Dr. Guerin had to identify how the disclosed and accused algorithms are equivalent on a limitation by limitation basis. Dr. Guerin succeeded in this task when he extensively described the operation of the algorithms disclosed in the patent and compared them to the algorithms found in the accused products in the context of Claim 12. When discussing Claim 21, Dr. Guerin summarized how this evidence related to that claim, rather than

reiterating his previous testimony, and the Court does not find his failure to engage in detailed repetition problematic.

In its Reply Brief, Newbridge contends that the record citations submitted by Lucent are blanket references with no real substance. However, a review of the record reveals that Lucent's citations are relevant, as they highlight that portion of the transcript in which Dr. Guerin explained how the algorithms disclosed in the patent were implemented in the accused products and why the algorithms were equivalent on a limitation by limitation basis. (Tr. at 411-27 and PX 3142 (describing how the "virtual scheduling algorithm" in the ATMizer firmware is equivalent to each element of Claim 12); Tr. at 433-45 and PX 3177 (same for the ATMC implementation); Tr. at 450-55 (same for frame relay)). In the context of Claim 21, Dr. Guerin gave his opinion that the structure for the "means for determining the rate" element was a processor executing the algorithms previously discussed. (Tr. at 466-67). Dr. Guerin then supplemented his previous testimony by addressing the "inelastic algorithm," which was not discussed in the context of Claim 12, and opining that the "inelastic algorithm," differed only slightly from the algorithms previously addressed. (Tr. at 470-75; PX 662).

As for the third element of Claim 21 in particular, Dr. Guerin testified that the relevant function of this element was to assess "how fast is this user sending, and comparing that to

whatever rate contract the user has. And when the rate contract is violated, its exceeded, generating a mark, because the packet is an excessive rate packet." (Tr. at 462.) Dr. Guerin then went on to describe how this element was present, in both structure and function, in the accused products. (Tr. at 467-470; 474-475). Thus, the Court concludes that Dr. Guerin applied the appropriate claim construction in his analysis and performed an appropriate infringement analysis.

2. Whether Lucent was required to and failed to present particularized testimony and linking argument

Newbridge next contends that Lucent was required to present particularized testimony and linking argument with regard to the "means-plus-function" elements in Claim 21 of the Eckberg '810 Patent. The statutory authority for allowing a patentee to use "means-plus-function" elements is provided in 35 U.S.C. § 112, ¶ 6. According to Newbridge, Paragraph 6 of Section 112 is "a statutory 'application of the doctrine of equivalents in a restrictive role, narrowing the application of broad literal claim elements;' " and therefore, the requirements of particularized testimony and linking argument should apply where a plaintiff seeks to prove the literal infringement of a means-plus-function element or claim. (D.I. 628 at 15, quoting Warner-Jenkinson, 520 U.S. at 28).

To establish that an accused product literally infringes a

Section 112, Paragraph 6 limitation, a plaintiff must show "that the relevant structure in the accused device performs the identical function recited in the claim and [is] identical or equivalent to the corresponding structure in the specification." Odetics, Inc. v. Storage Technology Corporation, 185 F.3d 1259, 1267 (Fed Cir. 1999). While both the Supreme Court and the Federal Circuit have recognized that the test for structural equivalence under Section 112, Paragraph 6 and the test for infringement under the doctrine of equivalence are closely related in that they both invoke the concept of insubstantial change, neither court has found the doctrine of equivalents test or analysis to be "wholly transferable to the § 112, ¶ 6 statutory equivalence context." Id. For example, in Odetics, the Federal Circuit expressly recognized that the tripartite function/way/result test for the doctrine of equivalents cannot apply precisely to the statutory equivalence context, because under statutory equivalence, functional identity is required, thereby reducing the test to a "way" and "result" analysis. Id. Similarly, the Federal Circuit declined to graft the component-by-component analysis required under the doctrine of equivalents to the Section 112, Paragraph 6 analysis. Id. at 1267-1268. Thus, the similarity between statutory equivalence and the doctrine of equivalents has not lead to the wholesale adaptation of the doctrine of equivalents' requirements to the statutory

equivalence context.

As for the particularized testimony and linking argument requirement under the doctrine of equivalents, the Court is unaware of, and Newbridge has not identified, any case where this requirement has been extended to cover Section 112, Paragraph 6 equivalence. Indeed, insofar as the Court is aware, more generalized testimony from expert witnesses has been sufficient to establish literal infringement where Section 112, Paragraph 6 limitations are involved. For example, in Symbol Technologies, Inc. v. Opticon, Inc., 935 F.2d 1569, a co-inventor testified as an expert on the question of literal infringement involving a claim with means-plus-function limitations. The co-inventor's testimony did not go into detail about the equivalency between the structure disclosed in the specification and that present in the accused product. Rather, the witness used charts showing each asserted claim broken down and numbered by limitation. The witness also had drawings showing numbered structures in the accused product. The witness opined that the numbered limitations and their correspondents in the drawing of the accused product were equivalent. The Federal Circuit noted that equivalence under Section 112, Paragraph 6 is a question of fact, and the role of challenging the factual underpinnings of an expert's position belongs to the opponent on cross examination. Thus, the Federal Circuit did not impose any heightened

evidentiary requirements in the Section 112, Paragraph 6 context, and in fact, accepted less detailed testimony as sufficient to present a prima facie case of literal infringement in the Section 112, Paragraph 6 context. Given the Federal Circuit's approach in Symbol and its caution in extending the requirements of the doctrine of equivalents analysis to Section 112, Paragraph 6 in Odetics, the Court is reluctant to impose the "particularized testimony and linking argument" evidentiary formula to the Section 112, Paragraph 6 context absent guidance from the Federal Circuit. Accordingly, the Court declines to adopt Newbridge's argument that Lucent was required to show particularized testimony and linking argument.

Aside from its argument that Lucent was required to show particularized testimony and linking argument, Newbridge also contends in this section of its argument, that Lucent failed to offer any evidence that the accused Newbridge products are "packet switching node[s] with a receive terminal" and that these products have "a channel . . . for transmitting packets of data at a selectable one of a plurality of transmission rates." (D.I. 628 at 16). After reviewing the record, the Court is persuaded otherwise. Dr. Guerin discussed both these elements in his claim construction and in his infringement analysis. (Tr. at 460-61, 465-466, 472-473; see e.g. PXs 25 at 10, 15, 20; 52A at T1A1-1; 537 at I1A1-2-T1A1-3; 670 at 16; 1577 at 17.4-2-17.4-3; 2733 at

35.1-4-25.1-8; 2751 at 26.4-2-26.4-15). Accordingly, the Court cannot conclude that the evidence offered by Lucent was insufficient to support the jury's verdict.

3. Whether Lucent presented substantial evidence of infringing activity within the United States

Like its argument in the context of Claim 12 of the Eckberg '810 Patent, Newbridge contends that Lucent failed to present any evidence of direct infringement in the United States with respect to Claim 21. Specifically, Newbridge directs the Court to its previous argument in the context of Claim 12.

Unlike Claim 12, in which Lucent charged Newbridge with infringement by inducement, with respect to Claim 21, Lucent accused Newbridge of directly infringing Claim 21 through its sales of the accused products in the United States. As discussed previously in the context of Claim 12, the Court concludes that substantial evidence exists that Newbridge sold the accused products in the United States with cards containing the infringing apparatus. Accordingly, the Court concludes that Lucent presented substantial evidence to support the jury's verdict of infringement.

D. Whether Newbridge Is Entitled To A Judgment Of Noninfringement As A Matter Of Law With Regard To Claim 10 of the Eckberg '811 patent

The jury returned a verdict in favor of Lucent on its claim that Newbridge infringed Claim 10 of the Eckberg '811 patent. By its Renewed Motion For Judgment As A Matter Of Law, Newbridge

raises four challenges to the jury's finding. Specifically, Newbridge contends that (1) Dr. Guerin's opinion was not based on an application of the Court's claim construction; (2) Dr. Guerin ignored the preamble limitation in his analysis of the accused products; (3) Dr. Guerin improperly compared certain accused products to another product, rather than to the properly construed claim language; and (4) Lucent failed to present evidence of direct infringement, and therefore, insufficient evidence supports the jury's verdict of infringement by inducement. The Court will address each of Newbridge's arguments in turn.

1. Whether Dr. Guerin's opinion was based on an application of the Court's claim construction

Newbridge contends that Dr. Guerin's opinion cannot be substantial evidence of infringement, because Dr. Guerin failed to base his opinion on the Court's claim construction. Specifically, Newbridge relies on that portion of Claim 10 which provides "determining whether or not the data packet is marked as being transmitted at an excessive rate." ('811 Patent, col. 14, ll. 5-6). The Court construed this limitation to mean "determining whether the packet is marked in a network environment where marking is being performed to designate those packets that are transmitted at excessive rates." (D.I. 602 at 19). According to Newbridge, "Dr. Guerin did not testify that any Newbridge product did more than determine whether the data

packet was marked," and Newbridge's products "can not determine whether the packet was marked in any particular 'network environment.'" (D.I. 628 at 17) (emphasis in original). Thus, Newbridge contends that Lucent failed to present substantial evidence that the accused products met this limitation as construed by the Court.

In response to Newbridge's argument, Lucent contends that Newbridge is misconstruing the Court's claim construction in order to raise the same argument that the Court rejected in its claim construction rulings. Lucent further contends that substantial evidence exists to support a finding that the accused products perform this element of the claim.

The Court agrees with Lucent. In its claim construction argument, Newbridge contended that Claim 10 of the Eckberg '811 Patent required not merely a determination that a packet is marked, but also why a packet is marked. (D.I. 547 at 23; 569 at 13). Specifically, Newbridge argued that the phrase "as being transmitted at an excessive rate" required an evaluation of the mark on a packet to determine if the packet was marked because it was being transmitted at an excessive rate or for some other reason. The Court did not adopt this position, and agreed with Lucent that Newbridge's construction excluded the preferred embodiment of the '811 Patent. Accordingly, the Court will not permit Newbridge to reargue claim construction issues which the

Court has previously rejected.

Further, after reviewing the record, the Court concludes that Lucent introduced substantial evidence that this limitation was met in the accused products. (Tr. 496, 499-501, 504, 506, 508-09, 510-12, 611-612, 613, 629; PX 275 at 15; PX 2091 at 23). Accordingly, the Court is unpersuaded by Newbridge's argument that Dr. Guerin's opinion failed to consider the Court's claim construction and its argument that insubstantial evidence exists to support the jury's verdict.

2. Whether the preamble of Claim 10 of the Eckberg '811 Patent is a limitation which Dr. Guerin ignored in his analysis of the accused products

Newbridge next contends that the preamble of Claim 10, "[a] method for dropping a data packet to be transmitted from a switch node in a packet switching network," ('811 Patent, col. 14, ll. 1-3), is a limitation on Claim 10, and Dr. Guerin ignored this limitation in his analysis. Because there is no evidence that the accused methods satisfy this limitation, Newbridge contends that the jury's verdict of infringement must be set aside.

In response to Newbridge's argument, Lucent contends that the preamble of Claim 10 is not a limitation. Lucent further contends that Newbridge's argument is an attempt to reargue claim construction.

The Court agrees with Lucent and believes that Newbridge's argument is a renewed attempt to argue that the preamble limited

Claim 10 to "output dropping."⁸ The dispute presented in the claim construction briefing was whether the preamble of Claim 10 was a limitation, and if it was, what was a proper construction of the limitation. The Court concluded that the body of the claim fully set forth the invention, see EMI Group N. Am. v. Cypress Semiconductor Corp., 68 F. Supp. 2d 421, 430 (D. Del. 1999) and that the preamble merely described the intended use of the invention and was not intended as a limitation on it. See Locite Corp. v. Ultraseal Ltd., 781 F.2d 861, 868 (Fed. Cir. 1985), overruled on other grounds by, Nobelpharma AB v. Implant Innovations, Inc., 141 F.3d 1059 (Fed. Cir. 1998). Accordingly, the Court declined to construe the preamble as limiting the claim to "output dropping."

In a related argument raised in their Reply Brief, Newbridge faults the Court for not instructing the jury that the preamble is not a limitation on the claim. At the time of the Markman briefing, the Court understood Newbridge's position to be that the preamble was a limitation and should be construed as discussed above. The Court understood Lucent's position to be that the preamble merely described intended use, and therefore needed no construction. The Court agreed with Lucent, and therefore, provided no interpretation. Because the Court did not

⁸ Output dropping refers to dropping the data packet at the output side of the buffer. (D.I. 547 at 20.)

view the preamble as limiting the claim to "output dropping," it did not so charge the jury. Moreover, the Court is not aware of, and Newbridge has not cited to, any case law requiring the Court to give such an instruction. Indeed, this Court has held that where the preamble was not a limitation on a claim, it was not improper to omit the preamble from a claim chart in the infringement section of a jury's verdict form. See e.g. EMI Group North America, Inc. v. Cypress Semiconductor Corp., 104 F. Supp. 2d 370, 388 (D. Del. 2000). If it was not error to omit the preamble language entirely from a verdict form on infringement, the Court is not convinced that it would be error to omit an instruction that the preamble was not a limitation from the jury charge.

3. Whether Dr. Guerin improperly compared certain Newbridge products to another product rather than to the properly construed claim language

Newbridge next contends that Dr. Guerin improperly compared certain Newbridge products to another product, rather than to the properly construed claim language. For example, Newbridge contends that Dr. Guerin failed to perform the correct analysis because he used the Vivid CS1000 switch as a baseline, and then, proceeded to testify that his analysis of the CS3000, 36170 and 36177 would be the same as for the CS1000.

In response to Newbridge's argument, Lucent contends that Dr. Guerin was not required to provide redundant testimony.

According to Lucent, the evidence from Newbridge documents and binding admissions from Newbridge's 30(b)(6) witnesses demonstrated that different Newbridge products used identical cards or components containing the same features that infringed Claim 10 of the '811 Patent, or different Newbridge products worked "in the same way" to perform the infringing features. Thus, Lucent contends that it was appropriate for Dr. Guerin to refer the jury back, where appropriate, to his earlier analysis of a product that contained the same cards or features.

The parties' arguments basically require the Court to address two questions. First, the Court must consider whether it was appropriate for Lucent to present its testimony in the manner it chose during trial. Second, the Court must consider whether Lucent actually satisfied its burden of proof on infringement with the evidence it presented.

With regard to the way in which Lucent presented its evidence, the Court cannot conclude that Lucent's approach to proving infringement was per se improper. This case involved a vast number of accused products. One need only refer to the forty-six page proposed special verdict form submitted by Newbridge to realize the complexity of this case. (D.I. 596). The various sections of the proposed special verdict form dealing with Claim 10 of the Eckberg '811 patent alone list some twenty six accused products. Given that the case involved five patents

and thirteen different claims, it is clearly in the interest of judicial economy to reduce redundant testimony wherever possible. That being said, it is equally true that a plaintiff may not avoid its burden of proof for the sake of brevity.

Turning to the mechanics of the proof, a plaintiff in this circumstance could have its expert compare the properly construed claim to one accused product "A". That expert could then opine that certain other accused products "B" contain, for example, a certain component that contains the infringing feature, and that therefore, his or her testimony would be the same for the new subset of products "B" as for that discussed in detail "A". The expert might also opine that another subset of accused products "C" operates in the "same way" as the accused product discussed in detail "A", and that therefore, his or her testimony would again be no different for the subset of products "C" as for that discussed in detail "A".

In so doing, the expert's form of testimony would conform to the Federal Rules of Evidence, which apply to patent cases. See Fed. R. Evid. 101; 1101. Rule 705 allows the expert to testify in the form of opinions or inferences and to give his or her reasons therefor, without the need to disclose the underlying facts or data. Even more, the Rules guide the opposing party in how to counter this testimony through the use of cross examination, the "greatest legal engine ever invented for the

discovery of truth." California v. Green, 399 U.S. 149, 158 (1970) (citation omitted). Continuing the example discussed above, after the plaintiff's expert has opined that his infringement analysis for "B" and "C" would be no different than that for "A", the defendant has the opportunity to highlight the differences between "A", "B" and "C" that undercut the plaintiff's expert opinion. See Symbol Technologies, 935 F.2d at 1575; see generally 4 Jack B. Weinstein and Margaret A. Berger, Weinstein's Federal Evidence § 705.05 (2d ed. 2000).⁹

After the conclusion of the presentation of the evidence, the jury as factfinder performs its task. As discussed, it can only find that a product infringes after a comparison of the product and the claim. Assuming that it accepts the testimony proffered by the plaintiff and rejects that proffered by the defendant, it can find, consistent with its instructions, that each of "A", "B" and "C" when individually compared with the claim, infringe that claim for the reasons detailed with respect

⁹ The Court does not intend to convey the impression that the burden of proof shifts. It does not. The Federal Rules of Evidence allow the party with the burden of proof to introduce that proof through the reasons and opinions of an expert, without requiring that expert to also present the underlying facts and data. The opponent has the opportunity to demonstrate that the burden has not been met by showing how the expert's underlying facts and data don't support the opinion. Also, the Court does not hold that an expert can pronounce a conclusory opinion of infringement and expect the verdict to stand. Such a verdict would not be supported by substantial evidence. That is not the case here, however.

to "A".

In the Court's view, Lucent used the approach described by the Court successfully and presented sufficient evidence to satisfy its burden of proof on infringement. Lucent introduced evidence from Newbridge documents and 30(b)(6) witnesses and the opinion of its expert that the infringement analysis of certain products discussed in detail would be the same as that of the analysis done in summary fashion. (Tr. 611-12, 619, 659, 680, 683-88, 691-92, 706; PX 102; PX 267; PX 280; PX 283; PX 287). Newbridge had an opportunity to challenge this testimony on cross examination. To the extent that Newbridge challenged this testimony, the verdict indicates that the jury accepted Lucent's proffer. To the extent that Newbridge failed to challenge this testimony, Newbridge has waived its right to raise the issue. See 4 Weinstein at § 705.05. Furthermore, there is nothing in the verdict that leads the Court to believe that the jury in its deliberations improperly compared accused product to accused product, rather than applying the same infringement analysis between the claim and each accused product. Because the Court concludes that Dr. Guerin's testimony appropriately compared accused device to claim language and that it was not error for Dr. Guerin to avoid testimony that would be repetitive, the Court finds that Newbridge has not sustained its argument that Dr. Guerin's analysis was inappropriate and concludes that Lucent

presented sufficient evidence to support the jury's verdict of infringement.

4. Whether Lucent presented substantial evidence demonstrating that Newbridge induced the infringement of Claim 10 of the Eckberg '811 Patent

As with its argument concerning Claim 12 of the Eckberg '810 Patent, Newbridge contends that it cannot be liable for inducing infringement, because Lucent failed to present evidence of direct infringement in the United States. As with Claim 12 of the Eckberg '810 Patent, the Court concludes that substantial evidence exists that Newbridge sold the accused products in the United States, that Newbridge supplied cards with those products that contained the infringing features, and Newbridge distributed manuals instructing customers how to configure the products to perform the infringing methods. (Tr. 533-535; PXs 537 at T1A2-1-T1A2-3; 1577 at 17.4.2-17.4.3; 1693 at 295, 300-304, 314). In addition, Lucent presented evidence that certain products had factory set defaults that enabled the products to perform the infringing method and that other accused products always operated in an infringing manner. (Tr. 626-627; 689-690). Accordingly, for the reasons discussed previously in the context of Claim 12 of the Eckberg '810 Patent, the Court concludes that Lucent presented sufficient evidence to support the jury's verdict that Newbridge induced the infringement of Claim 10 of the Eckberg '811 Patent.

E. Whether Newbridge Is Entitled To A Judgment Of Noninfringement As A Matter Of Law With Regard To Claim 12 of the Eckberg '811 Patent

1. Whether Substantial Evidence Supports The Jury's Verdict Of Infringement Regarding Claim 12 of the Eckberg '811 Patent

By its Motion, Newbridge contends that Lucent failed to present sufficient evidence to support the jury's verdict of infringement regarding Claim 12. Specifically, Newbridge contends that Dr. Guerin presented only "conclusory answers to leading questions that were neither asked nor answered in the context of the Court's construction of limitations of that claim." (D.I. 628 at 20).

In response to Newbridge, Lucent contends that Newbridge's argument focuses on the form in which Lucent presented its evidence, rather than on the substance of the evidence. Similar to its argument in the context of Claim 10 of the '811 Patent, Lucent contends that steps (c) through (g) of Claim 12 of the '811 Patent are nearly identical to the corresponding limitations in Claim 10 of the '811 Patent, and thus, it was appropriate for Dr. Guerin to refer the jury back to his analysis of Claim 10.

Conclusory opinions are not the type of substantial evidence sufficient to support a jury's verdict of infringement. See ATD Corp. v. Lyndall, Inc., 159 F.3d 534, 546 (Fed. Cir. 1999). However, after reviewing the substance of Dr. Guerin's testimony and the other evidence offered by Lucent on the question of

infringement of Claim 12 of the Eckberg '811 Patent, the Court concludes that Lucent presented substantial evidence sufficient to support the jury's verdict. As a review of Claim 10 and Claim 12 of the '811 Patent indicates, Claim 10 and Claim 12 are quite similar. In discussing Claim 12 of the '811 Patent, Dr. Guerin explained that Claim 12 is a method claim consisting of a number of steps covering both marking and dropping aspects of data traffic management. (Tr. at 515:4-10). Responding to a question directed at the differences between Claim 12 and the previously discussed Claim 10, Dr. Guerin explained:

The primary difference is we have these two additional steps at the beginning of the claim which are Steps A and B which talks [sic] about essentially identifying the packet that belongs to a connection or one customer, and then performing the monitoring and marking function [on] those packets. And that part was not present in the other claim we talked about, Claim 10, because Claim 10 only dealt with the dropping. It was actually assuming that the marking had been done somewhere else, basically in the context of the '810 patent.

(Tr. at 515:15 - 516:3.)

Dr. Guerin went on to describe what he considered a less important distinction between step (e) of Claim 12 and step (c) of Claim 10:

The other sort of difference, although it's, in my mind, a less difference is when you look at Step E ... [which] is a little bit more specific in terms of which places in a packet-switching node are you going to be evaluating congestion, looking at whether you have enough resources or not. And it's essentially specialized to the output of the switching node.

Now typically, or in many switch architectures, that's the part where most often the congestion occurs because essentially you're going through the switch, and the switch is getting all of those inputs and then feeding all of that traffic from each input from all of the inputs potentially onto a single output. And that's where you're therefore, most likely to get congestion.

(Tr. at 516:4 - 516:23.)

It was Dr. Guerin's testimony, then, that steps (a) and (b) of Claim 12 had no counterpart in Claim 10, and that step (e) of Claim 12 was similar but more narrow than step (c) of Claim 10. In response to additional questions, Dr. Guerin explained that steps (c), (d), (e), (f) and (g) of Claim 12 had counterparts in Claim 10. Thus, a reasonable inference from Dr. Guerin's testimony as a whole, including that portion of his testimony highlighting the differences between Claim 12 and Claim 10 is that Dr. Guerin believed there was no difference between step (c) of Claim 12 and step (a) of Claim 10, step (d) of Claim 12 and step (b) of Claim 10, step (f) of Claim 12 and step (d) of Claim 10, and step (g) of Claim 12 and step (e) of Claim 10.¹⁰

After his discussion of the claim elements, Dr. Guerin went on to address whether the limitations disclosed by step (a) of

¹⁰ The language of steps (c), (d), (f) and (g) of Claim 12 is not identical to that of steps (a), (b), (d), and (e) of Claim 10. However, a reasonable inference from Dr. Guerin's testimony is that the added language in Claim 12 refers to the segregation of individual customer packets taught by Steps (a) and (b) of Claim 12. Compare Claim 12 step (c) "preparing to transmit one of that customer's data packets" with Claim 10 step (a) "preparing to transmit the data packet."

Claim 12 ("segregating data packets transmitted by one customer into the network") and Step (b) of Claim 12 ("marking that one customer's data packets as being transmitted into the network at an excessive rate"), which he characterized as "monitoring and marking" could be found in Newbridge's products. Dr. Guerin read a section from an interrogatory answered by Newbridge: "all versions of the 36170 ATM 3600 frame relay and [36170] frame relay implement the policing function on a per connection basis not on an aggregate basis as required by Claims 12 and 21."¹¹ (Tr. at 520.) He then gave his opinion that "implement[ing] the policing function on a per connection basis" referred to the steps (a) and (b) monitoring and marking of a certain customer's packets. (Tr. at 521-22).

It is correct that during his testimony concerning the '811 Patent, Dr. Guerin refers back to testimony given concerning the '810 patent. For example, Dr. Guerin testified "[p]olicing, I believe I mentioned earlier, it's another word that is commonly used to refer to monitoring and marking decisions on the packets based on ... whether the user is sending too much" (Tr. at

¹¹ The reference to Claim 12 and 21 indicate that Newbridge's answer was directed to Claim 10 of the Eckberg '810 patent, a point made by Newbridge counsel at trial. However, in the Court's view, the patent that Newbridge's answer was directed to is irrelevant, because Newbridge's answer is an admission of how the Newbridge product works and the Newbridge product should work the same way regardless of what patent it is accused of infringing.

519:3-7) (testifying concerning steps (a) and (b) of Claim 12 of the '811 patent). Earlier, he testified about the policing functions of the Newbridge products, for example the ATMizer component (Tr. at 407 et seq.; PX 25; PX 666); ATMC component¹² (Tr. at 428 et seq.; PX 569; PX 260); the 36150 ATM (Tr. at 446:6-13); and the 3600 family (Tr. at 448 - 455; PX 663). Given the overlap in these concepts, the Court cannot conclude that it was improper for Dr. Guerin to describe the implementation of policing by Newbridge products when discussing policing as disclosed by the '810 patent, and then refer to that same testimony when discussing policing as disclosed by Claim 12 of the '811 patent. Moreover, Dr. Guerin's testimony was entirely consistent with the Court's construction of step (b).

Furthermore, the Court concludes that Dr. Guerin's testimony concerning steps (c) through (g) was proper. As discussed above, with the exception of the differences found in step (e), Dr. Guerin testified that his analysis for these steps would be the same as his analysis for the counterpart steps in Claim 10 of the '811 Patent. Thus, in the Court's view, it would have been redundant to require Dr. Guerin to restate in detail his prior opinion. Because the Court concludes that Dr. Guerin's testimony and the other evidence presented by Lucent was substantial

¹² The components are manufactured by a third party and used on Newbridge cards.

evidence sufficient to support the jury's verdict, the Court will deny Newbridge's motion for a judgment of non-infringement as it relates to Claim 12 of the Eckberg '811 Patent. (Tr. at 493-526, 611-47, 657-660; PX 90, 91, 102, 104, 267, 275, 280, 283, 287, 661, 2091.)

2. Whether the preamble of Claim 12 of the Eckberg '811 Patent is a limitation which Dr. Guerin ignored in his analysis of the accused products

As with Claim 10 of the Eckberg '811 Patent, Newbridge contends that the preamble of Claim 12 of the Eckberg '811 Patent is a limitation on Claim 12, and Dr. Guerin ignored this limitation in his analysis. The language of the preamble of Claim 12 of the Eckberg '811 Patent is identical to the preamble language of Claim 10 of the Eckberg '811 patent, and Newbridge's argument is likewise identical to that advanced in the context of Claim 10. Accordingly, for the reasons discussed in the context of Newbridge's prior argument regarding the preamble of Claim 10, the Court rejects Newbridge's argument.

3. Whether Dr. Guerin's analysis of Claim 12 of the Eckberg '811 Patent is erroneous because he incorporated his analysis of Claim 10 of the Eckberg '811 patent in addressing steps (c) through (g) of Claim 12 of the Eckberg '811 patent

Because Dr. Guerin incorporated his analysis of Claim 10 of the Eckberg '811 Patent into his analysis of Claim 12 of the Eckberg '811 Patent, Newbridge contends that its previous arguments concerning Claim 10 of the '811 Patent apply with equal

force to Claim 12 of the '811 Patent.¹³ For the reasons discussed previously in the context of Newbridge's arguments relating to Claim 10 of the '811 Patent, the Court concludes that Newbridge is not entitled to relief.

4. Whether Lucent presented substantial evidence demonstrating that Newbridge induced the infringement of Claim 12 of the Eckberg '811 Patent

By its Motion, Newbridge incorporates the same argument it made regarding inducement in the context of Claim 12 of the Eckberg '810 Patent into its argument regarding Claim 12 of the Eckberg '811 Patent. For the reasons discussed previously in the context of Claim 12 of the Eckberg '810 Patent, the Court concludes that Lucent presented sufficient evidence to support the jury's verdict, and thus, Newbridge is not entitled to relief.

- F. Whether Newbridge Is Entitled To A Judgment Of Noninfringement As A Matter Of Law Regarding Claim 7 Of The Cheng '174 Patent

The jury returned a verdict in favor of Lucent on its claim that Newbridge induced infringement by its customers of Claim 7 of the Cheng '174 Patent under both the literal infringement and

¹³ Newbridge's brief actually refers to "Claim 10 of the '810 Patent," however, Claim 10 of the '810 Patent was not asserted in this action. Accordingly, the Court believes that Newbridge's reference to Claim 10 of the '810 Patent was a mistake, and that Newbridge actually meant Claim 10 of the '811 Patent, which would be consistent with the transcript citation offered by Newbridge for this argument. (D.I. 628 at 21, citing Tr. 524:5-525:14).

doctrine of equivalents theories of infringement. By its Renewed Motion For Judgment As A Matter Of Law, Newbridge raises two challenges to the jury's finding. Specifically, Newbridge contends that (1) Lucent failed to present substantial evidence that the method of Claim 7 is infringed, and (2) Lucent failed to present direct evidence of infringement of Claim 7. The Court will address each of Newbridge's arguments in turn.

1. Whether Lucent presented substantial evidence that the method of Claim 7 of the Cheng '174 Patent is infringed

By its Motion, Newbridge contends that Lucent failed to present substantial evidence to support the jury's verdict of infringement as it relates to Claim 7 of the Cheng '174 Patent. Specifically, Newbridge contends that Dr. Costello's testimony on this claim was conclusory and did not compare the claim elements to the methods employed in the accused products. Newbridge also contends that Dr. Costello did not present the particularized testimony and linking argument required to sustain a finding of infringement under the doctrine of equivalents.

In response to Newbridge's arguments, Lucent contends that Newbridge "concedes that the jury properly found literal infringement." (D.I. 645 at 27). Thus, Lucent does not address Newbridge's arguments regarding "particularized testimony and linking argument," because they are doctrine of equivalents arguments. However, Lucent contends that sufficient evidence was

presented regarding literal infringement through the testimony of Dr. Costello and the other documentary evidence offered by Lucent.

Based on Newbridge's arguments both in its Opening Brief and Reply Brief, the Court understands that Newbridge intended to challenge the jury's literal infringement verdict, as well as the jury's doctrine of equivalents verdict. (D.I. 656 at 20-21). Accordingly, the Court will examine Newbridge's arguments as they apply to both literal infringement and infringement under the doctrine of equivalents.

After reviewing the evidence Lucent presented at trial, the Court concludes that Lucent failed to offer substantial evidence sufficient to support the jury's verdict regarding the Cheng Patent under either literal infringement or the doctrine of equivalents. In discussing Claim 7 of the Cheng Patent, Dr. Costello explained how the elements of Claim 7 of the Cheng Patent corresponded to the elements of Claim 8 of the Cheng Patent, which Dr. Costello had previously explained read on the accused products. The only other testimony Dr. Costello provided on Claim 7 was as follows:

Q: [H]ave you reached an opinion as to whether the Newbridge chip implementation infringes Claim 7?

A: Yes, I have.

Q: What is it?

A: I believe the Newbridge chips do, in fact,

infringe Claim 7 for the reasons that I've explained.

Q: For the reasons that you've explained with respect to what?

A: Well, in indicating that the methods that we've outlined here with regard to Claim 7 correspond to the means that we've talked about here to Claim 8. And these methods implement the detection and correction of errors with the switching back and forth between states in the same way as we've described for the '174 patent.

(Tr. 866-867).

Based on this testimony, Lucent contends that the jury properly found infringement of Claim 7 for the reasons they found infringement of Claim 8. While Lucent's position sounds similar to the argument the Court addressed previously regarding Dr. Guerin's testimony, the situation presented by Dr. Costello's testimony is quite different. In the context of the Eckberg Patents, Dr. Guerin presented a detailed infringement analysis of one method claim, incorporated that prior testimony into his testimony concerning a second similar method claim, and then augmented his testimony by explaining how the additional elements were found in the accused products. The Court concluded that this type of "incorporation by reference" testimony was not improper and had the benefit of avoiding redundant testimony. However, unlike Dr. Guerin's testimony which compared two method claims, Dr. Costello's testimony compared a method claim, Claim 7, to an apparatus claim, Claim 8. In addition, Dr. Costello did

not augment his testimony to explain how the differences in Claim 7 read onto the accused products. Because of the differences between a method claim and an apparatus claim and Dr. Costello's lack of analysis regarding how the differences read onto the accused product, the Court concludes that Dr. Costello's mere incorporation by reference of his apparatus analysis, without further explanation, is insufficient to establish literal infringement.

As for the jury's finding of infringement under the doctrine of equivalents, the Court observes that Lucent presented no testimony directed to the doctrine of equivalents for Claim 7. Because the Court concludes that Lucent failed to present substantial evidence to support the jury's verdict, the Court will grant Newbridge's application for a judgment of noninfringement with respect to Claim 7 of the Cheng Patent.

2. Whether Lucent presented substantial evidence demonstrating that Newbridge induced infringement of Claim 7 of the Cheng Patent

Having concluded that Lucent failed to present sufficient evidence to support the jury's verdict of infringement, the Court need not consider Newbridge's remaining argument regarding the sufficiency of the evidence of direct infringement. Accordingly, the Court will enter a judgment of noninfringement in favor of Newbridge on Claim 7 of the Cheng Patent.

G. Whether Newbridge Is Entitled To A Judgment Of Noninfringement As A Matter Of Law Regarding Claims 8,

9, And 16 Of The Cheng '174 Patent

The jury returned a verdict in favor of Lucent on its claim that Newbridge literally infringed Claims 8, 9, and 16 of the Cheng '174 patent. Claim 8 is an apparatus claim drafted in a means-plus-function format. Claims 9 and 16 are dependent on Claim 8. By its Renewed Motion For Judgement As A Matter Of Law, Newbridge contends that (1) Lucent failed to provide sufficient evidence to establish that the Newbridge products perform the functions for the deriving means and the switch means, and (2) Lucent failed to establish that the Newbridge products are identical or equivalent to the "structures" identified in the various means-plus-function limitations in the claims. (D.I. 628 at 24).

1. Whether Lucent provided sufficient evidence to establish that the Newbridge products perform the functions for the deriving means and the switch means

By its Motion Newbridge contends that "the record does not contain sufficient evidence to establish that the structures in the Newbridge products . . . perform the functions identified in the jury instructions for the deriving means and the switch means." (D.I. 628 at 24). After reviewing the record as it pertains to this issue, the Court disagrees with Newbridge. Dr. Costello explained both the deriving means and switch means in detail, pointed out where in the Newbridge products they were found, and described how the Newbridge products performed those

functions. (Tr. 838-840, 840-847). In addition, Lucent offered several documents corresponding to and supporting Dr. Costello's testimony on these issues. (PX 114, 147, 236-239, 242-247).

Thus, taking the record on this point as a whole, the Court concludes that Lucent presented sufficient evidence to establish that the structures identified in the Newbridge products performed the functions for the deriving and switching means.

2. Whether Lucent failed to present sufficient evidence of structural equivalence between the accused products and the means-plus-function elements of Claim 8

As for Newbridge's argument that Lucent failed to introduce sufficient evidence of structural equivalence between the accused Newbridge products and the means-plus-function elements of Claim 8, Newbridge's argument basically restates the position it advanced with respect to Claim 21 of the Eckberg '810 Patent, i.e. that proof of Section 112, Paragraph 6 equivalents requires the Lear Siegler particularized testimony and linking argument. As it pertains to Claim 8 specifically, Newbridge contends that Lucent failed to introduce particularized testimony and linking argument on equivalence between the structure of the PMC chip and the 36150 TI card software in the accused products and the structure disclosed in the specification. For the reasons discussed by the Court previously, the Court rejects Newbridge's argument that Lucent was required to show particularized testimony and linking argument to prove structural equivalence

under Section 112, Paragraph 6 in a literal infringement context. Again, under the Federal Rules of Evidence, an expert witness need not disclose the factual underpinnings of his opinion in direct testimony. Further, Newbridge had ample opportunity to expose any flaws in the factual underpinnings of Dr. Costello's testimony during its cross-examination.

Further, upon reviewing the record, the Court concludes that Dr. Costello's testimony and the other evidence on structural equivalence regarding the PMC chip and the software implementation was adequate to support a literal infringement verdict. For example, Dr. Costello testified in detail regarding the equivalence between the error correction circuit means in the first element of Claim 8 and the corresponding structures used in the PMC chip. (Tr. at 833-35 (first element of Claim 8 and PMC chip)). Dr. Costello then repeated similarly detailed testimony for the remaining elements of Claim 8 and the corresponding structures in the PMC chips. (Tr. at 835-38 (second element of Claim 8 and PMC chip); Tr. at 838-40 (third element of Claim 8 and PMC chip); Tr. at 840-46 (fourth element of Claim 8 and PMC chip); Tr. at 850-53 (Claim 9 and PMC chip); Tr. at 853-57 (Claim 16 and PMC chip); PX 3017 (Newbridge products using the PMC chip)). Dr. Costello also testified in detail and at length regarding the software implementation. (Tr. at 885-901). Because the Court concludes that Lucent presented substantial

evidence sufficient to support the jury's verdict of infringement, the Court will deny Newbridge's Renewed Motion For Judgment As A Matter Of Law as it pertains to Claims 8, 9 and 16 of the Cheng '174 Patent.¹⁴

H. Whether Newbridge Is Entitled To A Judgement Of Noninfringement As A Matter Of Law Regarding The Petr '087 Patent

The jury returned a verdict in favor of Lucent on its claim that Newbridge literally infringed Claims 1 and 8 of the Petr '087 Patent. By its Renewed Motion For Judgment As A Matter Of Law, Newbridge raises two arguments (1) Dr. Kabal's comparison was improper; (2) there is no evidence of sales or offers to sell allegedly infringing equipment not covered by the implied license "within the United States." The Court will address each of Newbridge's arguments in turn.

1. Whether Professor Kabal's comparison was improper

By its Motion, Newbridge contends that Lucent's expert, Professor Kabal, improperly compared the patent claim elements to G.726, a type of international standard for encoding, and not to the accused products. (D.I. 628 at 26). Specifically, Newbridge

¹⁴ Newbridge's argument that Lucent failed to present substantial evidence to support the jury's verdict as it pertained to the dependent Claims 9 and 16 of the Cheng '174 Patent is based on its argument that insufficient evidence was presented regarding infringement of the independent Claim 8. Because the Court rejects Newbridge's argument as it pertains to Claim 8, it likewise rejects its argument as it pertains to the dependent claims, Claims 9 and 16.

contends that this comparison violates a fundamental precept of patent law that "things equal to the same thing may not be equal to each other." KSM Fastening Systems, Inc. v. H.A. Jones Co., Inc., 776 F.2d 1522, 1528 (Fed. Cir. 1985).

In response to Newbridge's argument, Lucent contends that Dr. Kabal's comparison was not improper, because the unrebutted evidence showed that the G.726 standard is the precise voice-coding technology implemented by Newbridge's products. In addition, Lucent distinguishes the cases cited by Newbridge contending that those cases describe situations in which either the accused product was compared to an embodiment of the patent claim and not the claim itself, or the accused product was compared to another previously adjudicated infringing accused product, and not the claim itself. According to Lucent, it did not use the G.726 standard as either an embodiment of the claims or as an equivalent to the accused product. Rather, Lucent contends that its trial evidence compared the claims against a document that detailed the very operation of the accused product.

At trial, Lucent introduced evidence that the Newbridge accused products conformed to the G.726 standard (Tr. at 1104-05; PX 458 at 1), and that the G.726 standard gave a detailed description of ADPCM encoder decoder operation. Newbridge's own technical documents reference that the G.726 standard describes the voice-coding technology implemented by its products. (PX 863

at 61; PX 166 at 1, 3; 2866 at 1.4-34). Thus, Lucent's argument is that a Newbridge document produced in discovery that admits conformance to the G.726 standard is, in effect, the same as a document that details the innermost workings of the accused product. The Court agrees. The admission by Newbridge that its accused products conform to the G.726 standard is an admission by Newbridge that the standard discloses the operation of the accused products. Because the accused products operate in the same manner disclosed by the G.726 standard, the Court cannot conclude that a comparison of the patent's claim to the very standard which accurately describes the operation of the accused products is inappropriate.

Further, Lucent is correct that the cases relied upon by Newbridge are distinguishable. In both Zenith Lab., Inc. v. Bristol-Meyers Squibb Co., 19 F.3d 1418 (Fed. Cir. 1994) and Atlantic Thermoplastics Co. v. Faytex Corp., 970 F.2d 834, 846 (Fed. Cir. 1992), the issue was whether the accused product could be compared to an embodiment of the patent claims, rather than to the claims themselves. The Federal Circuit has repeatedly held that this type of comparison, which in essence substitutes a patentee's commercial embodiment or other version of the product or process for the patent claims itself, is inappropriate. However, neither Zenith nor Atlantic Thermoplastics speak to the type of comparison made in this case by Lucent's expert.

In conducting his infringement analysis, Dr. Kabal testified as follows:

Q: Professor, I would like to turn to the third step of your infringement analysis. Would you tell us what that was?

A: Yes. Having determined that the Newbridge products implement ADPCM, I wanted to compare [the] ADPCM that was implemented in the Newbridge products [with] the patent, so I wanted to compare the patent claims with the ADPCM in the Newbridge products.

Q: How did you do that?

A: Since the Newbridge products claim conformance to G.726, that, in fact, is a detailed description of the operation of the ADPCM encoder decoder in the Newbridge products. So I could compare the Claims 1 and 8 with the standard.

(Tr. 1104-1105 (emphasis added); see also PX 458 at 1).

Newbridge did not contest Dr. Kabal's analysis that the G.726 standard accurately describes the operation of the Newbridge products and Newbridge declined to provide any expert testimony regarding the '087 Patent. Because Lucent's unrebutted evidence demonstrated that the standard was an accurate description of the operation of the accused product, in the Court's view, the comparison made by Lucent's expert was not erroneous. To find otherwise, in the Court's view, would elevate form over substance. Although in form, the G.726 standard is not actually the accused product, in substance the unrebutted evidence showed that the G.726 standard is a detailed description of the accused

product.¹⁵ Accordingly, the substance of Dr. Kabal's analysis was a comparison of the patent claims to the accused product. Accordingly, the Court rejects Newbridge's argument that Dr. Kabal's erred in his infringement analysis.

2. Whether Lucent presented substantial evidence that Newbridge sold unlicensed infringing equipment within the United States

During trial, Lucent argued that three product lines were sold or offered for sale in the United States that fell within that the scope of Claims 1 and 8 of the Petr Patent. By its Motion, Newbridge challenges the sufficiency of the evidence Lucent offered by arguing that Lucent failed to prove that Newbridge sold or offered to sell these product lines in the United States, or that where Lucent did introduce evidence of a sale or offer to sell, the evidence only applied to products operating at 32 kilobits per second, the rate at which the jury found that Newbridge had a license to practice the Petr patents. (D.I. 604 at ¶ 34). The Court will discuss Newbridge's arguments

¹⁵ In its Reply Brief, Newbridge seems to suggest that the G.726 standard is an embodiment of the Petr patent's claims such that Zenith and Atlantic Thermoplastics would be applicable. However, Dr. Kabal's testimony is clear that he considered G.726 to be a detailed description of the operation of the ADPCM encoder decoder in Newbridge's products. Dr. Kabal then compared the claim elements to this standard. Dr. Kabal did not substitute the patent claims for a preferred embodiment of the claims as Newbridge appears to contend, and therefore, the Court rejects Newbridge's characterization of Dr. Kabal's testimony as falling within the parameters of Zenith and Atlantic Thermoplastics.

as they pertain to each product line.

(a) The VCM3 module for the 3600 switch

Newbridge concedes that Lucent presented evidence establishing that there were sales of the VCM3 module for the 3600 switch in the United States. (PX 436 at 3600-21; PX 1706 at 273.) However, Newbridge contends that although there was testimony at trial that the product could be operated at a rate other than the licensed 32kb/s, operation at unlicensed speeds could not happen absent modifications by the customer in the form of enabling software. Relying on High Tech Medical Instrumentation, Inc. v. New Image Industries, 49 F.3d 1551, 1555 (Fed. Cir. 1995), Newbridge contends that because user alteration is required for the accused device to perform in an infringing manner, the accused device does not infringe. (D.I. 628 at 28-29; 656 at 24).

Addressing the question of alterations or modifications to a device in High Tech, the Federal Circuit has recognized that a device does not infringe merely because it is capable of being modified to operate in an infringing manner. 49 F.3d at 1555. "The question is not what [a device] might have been made to do, but what it was intended to do and did do [T]hat a device could have been made to do something else does not of itself establish infringement.'" Id. (citing Hap Corp v. Heyman Mfg. Co., 311 F.2d 839, 843 (1st Cir. 1962), cert. denied, 373 U.S.

903 (1963). However, a device may infringe if it has the presently existing capability of functioning in the same manner described by the claim. See Intel Corp. v. United States Int'l Trade Comm'n, 946 F.2d 821, 832 (Fed. Cir. 1991); Cyrix Corp. v. Intel Corp., 846 F. Supp. 522, 536 (E.D. Tex. 1994), aff'd, 42 F.3d 1411 (Fed. Cir. 1994).

For example, in Intel Corp v. United States Int'l Trade Comm'n, the Federal Circuit examined a claim which required the device to be "programmable" to operate in a certain mode. Although the accused device was not specifically designed or sold to operate in that mode and no customer was ever told how to convert the device to that mode, or even that such a conversion was possible, the court concluded that the device infringed because it was "programmable" or capable of operating in the infringing mode. Thus, the court concluded that the accused device need not actually operate in the infringing mode, so long as it was capable of operating in that mode. 946 F.2d at 832.

After reviewing the testimony of Professor Kabal as it relates to this issue, the Court concludes that, viewed in the light most favorable to Lucent as the verdict winner, Professor Kabal's testimony was sufficient to establish that the accused Newbridge device was capable of performing in a manner which infringed the Petr Patent. On cross-examination, Newbridge's counsel and Professor Kabal engaged in the following exchange:

Q: Okay. I'll put on Plaintiff's 166.... And this says this is ... a working paper intended for limited internal distribution and discussion; isn't that correct?

A: I see that.

Q: So this is not a document that goes out to customers, is it?

A: No.

Q: So what this is talking about ... [is that] each channel may have the following options on the ADPCM side, and then it lists a number of compression rates that possibly could be physically used; isn't that correct?

A: That's right.

Q: But, in fact, Newbridge has never used anything for this card other than 32 KBS, has it?

A: I indicated that the -- I understood that at the switch level, at the 3600 level, that the user could not select one of those rates.

Q: So it's only a 32 KBS that's ever been sold or offered for sale?

A: The voice coding module itself is capable of operating at the other rates.

Q: But when it's actually provided to a customer, they're not able to use it, at any rate other than 32 KBS?

A: I guess without further modification, yes.

Q: By that customer, or somehow?

A: Yes.

(Tr. at 1131-32.)

On redirect examination by Lucent's counsel, Professor Kabal also testified as follows:

Q: Let's go to [VCM3] that I think [counsel for Newbridge] brought up, did you determine whether it was a coder and decoder in the [VCM3] module that was capable of doing speeds over 32 [kb/s]?

A: Yes, and the Newbridge chip is on that card.

Q: And Doctor, from your review of the Newbridge product literature and Newbridge technical witnesses, did you determine whether or not Newbridge took out the coder and decoder in the VCM3 that did ADPCM speeds at over 32 kilobits per second?

A: No. The card itself is still capable of all those rates.

Q: [Did] Newbridge [change the] software [so] that [it] wouldn't allow the user to select the speeds at other than 32 kilobits per second?

A: I don't think they took it out, I don't think. They just never enabled it in the first place.

(Tr. at 1153-54).

Summarizing Dr. Kabal's testimony, Dr. Kabal essentially testified that although the software in the Newbridge product was not enabled to perform at unlicensed rates, the Newbridge device was capable of operating at unlicensed rates and the software did not prevent operation at these rates. Dr. Kabal also testified that, as sold, Newbridge's product contained each and every element of Claims 1 and 8 of the Petr Patent, and that the elements of these claims included the apparatus for an unlicensed multirate ADPCM encoder and decoder. (Tr. 1152-1154). Thus, in the Court's view, this case is more closely aligned with the Intel decisions of the Federal Circuit and the Eastern District

of Texas than with High Tech decision, because the claims of the Petr Patent read on the device without alteration by the customer and thus, the accused device has the presently existing capability of performing in an infringing manner. Compare Intel Corp., 946 F.2d at 832 with Telemac Cellular Corp. v. Topp Telecom, Inc., 247 F.3d 1316, 1330 (Fed. Cir. 2001) (holding that device did not infringe where restriction was built into software preventing user from operating the device in an infringing manner); Stryker Corp. v. Davol, Inc., 10 F. Supp. 2d 841, 844 (W.D. Mich. 1998) (holding that device did not infringe because the probe that would be necessary to enable the device to perform in the infringing manner did not exist). Accordingly, the Court concludes that Newbridge is not entitled to a judgment of non-infringement regarding the VCM3 module for the 3600 switch.

(b) Voice Band Services Card for the MainStreetXpress
36170 and 36177

With regard to the Voice Band Service Cards for the MainStreetXpress 36170 and 36177, Newbridge raises two arguments. First, Newbridge contends that Lucent failed to establish that this product was "offered for sale" or "sold" within the United States. Second, Newbridge contends that even if an "offer to sell" or "sale" could be established, the software allowing a user to select unlicensed rates of speed, i.e. rates other than 32 kilobits per second, was disabled.

Under 35 U.S.C. § 271(a), infringement occurs when someone

"without authority makes, uses, offers to sell or sells any patented invention." 35 U.S.C. 271(a). Section 271(i) defines an "offer to sell" as "that in which the sale will occur before the expiration of the term of the patent." Explaining the policy justification for basing liability for infringement on an "offer to sell," the Federal Circuit explained that one of the purposes of adding an "offer to sell" to Section 271(a) is to prevent activity geared to "generating interest in a potential infringing product to the commercial detriment of the rightful patentee." Id.

Although an "offer to sell" in the patent context is not governed by contract law, courts have considered such factors as whether the alleged offer contains a description of the materials and a quoted price. See 3D Systems, Inc. v. Aarotech Laboratories, Inc., 160 F.3d 1373, 1379 (Fed. Cir. 1998). In addition, courts are required to look at the substance of the alleged offer to sell, rather than its form. Id. (holding that a price quotation letter was an offer to sell, despite the fact that it stated on its face that it was not an offer to sell, because such a holding would "exalt form over substance").

Viewing the testimony on this issue in the light most favorable to Lucent as the verdict winner and construing all reasonable inferences in favor of Lucent, the Court concludes that Lucent presented sufficient evidence to establish an offer

to sell the Voice Band cards in the United States. Specifically, Lucent presented the following deposition testimony of a Newbridge employee, Edwin Lloyd Froese:

Q: Has the voiceband services card for the MainStreetXpress 36170 or 36177 ever been sold?

A: Not as of yet.

Q: When is it first intended to be sold?

A: The date at which we reached a product in the Newbridge development cycle called in-service trials is, I believe, August 27th [, 1999]; that is the day at which Newbridge will begin selling versions of the 36170 and 36177, which support the voiceband services card.

(Tr. at 1167) (emphasis added).

* * *

Q: Are there specific customers who are lined up for in-service trials at this point?

A: Yes, I believe so.

Q: Do you know who any of those customers are?

A: I believe that a customer in China will be one of those customers.

Q: Do you know the name?

A: China Post.

Q: Any others in addition to China Post?

A: There is a [company] in the US named Twister. I expect they will be an in-service trial company.

(Tr. at 1167-68.)

Newbridge contends that "in-service trials" are not "sales." However, the unrebutted testimony of Mr. Froese highlighted above

expressly identifies the date of the "in-service trials" as the date on which Newbridge "will begin selling." In addition, Newbridge emphasizes Mr. Froese's use of the word "expect" in connection with his assertion that he "expected" Twister to be an in-service trial company, to suggest that Lucent presented insufficient evidence to "allow the jury to find that this at-one-time anticipated transaction was either a sale or offer for sale." (D.I. 656 at 25). The Court is not persuaded by Newbridge's argument. Mr. Froese identified Twister in response to a series of question asking him to identify customers who were already "lined up" for in-service trials. (Tr. 1167:14-16). Thus, drawing reasonable inferences in favor of Lucent, Mr. Froese's testimony established that Newbridge was, in fact, planning a sale to a company called Twister in Houston, Texas. Further, in the Court's view, the type of activity described by Mr. Froese can reasonably be said to be activity directed at "generating interest in a potential infringing product to the commercial detriment of the rightful patentee." Accordingly, the Court concludes that Lucent presented sufficient evidence to establish that Newbridge made an offer to sell the Voice Band cards within the United States.

As for Newbridge's argument that the Voice Band cards could not perform at infringing speeds absent modification by the customer, the Court rejects Newbridge's argument for the reasons

discussed in the context of the VCM3 module for the 3600 switch. Accordingly, the Court will deny Newbridge's motion for a judgment of noninfringement regarding the Voice Band cards.

(c) 36121/36123 products

With regard to the 36121/36123 products, Newbridge contends that Lucent's "evidence of sale or offer for sale of switches in the United States capable of performing ADPCM at an unlicensed rate is clearly inadequate." (D.I. 656 at 25.) Specifically, Newbridge contends that Lucent inappropriately equated "advertising" with an "offer for sale."

In response to Newbridge's argument, Lucent directs the Court to Professor Kabal's testimony that the 36121 and 36123 are manufactured by 3Com and Newbridge has sold 3Com "access products." In addition, Lucent directs the Court to testimony regarding Newbridge's alleged advertisement of the 36121 and 36123 products on its Internet web page.

After reviewing the evidence offered by Lucent on this subject, the Court concludes that the jury's verdict of infringement regarding the 36121 and 36123 is not supported by substantial evidence. Lucent directs the Court to documentary evidence consisting of print-outs depicting Newbridge's web site "advertisements" of the 36121 and 36123. (PX 2499, 2500). However, as Lucent's expert witness acknowledged, these web site pages do not contain any pricing information and are more akin to

"product catalogs," providing a description of the products depicted and/or discussed. (Tr. 1132-1133). In light of recent case law addressing web site pages, the Court is reluctant to conclude that these web advertisements are sufficient, in and of themselves, to constitute an offer to sell, because they do not contain pricing information and/or other ordering information. See Biometrics, LLC v. New Womyn, Inc., 112 F. Supp. 2d 869, 873 (E.D. Miss. 2000) (concluding that web site ads were an offer to sell within the meaning of Section 271(a), where web site contained pricing information, request form for web site visitor to request additional information on product and independent sales representative locator); VP Intellectual Properties, LLC v. Intec Corporation, 1999 WL 1125204, *5-6 (D.N.J. Dec. 9, 1999) (holding that an Internet site containing product descriptions but no pricing information is not an "offer to sell"); Intel Corporation v. Silicon Storage Tech. Inc., 20 F. Supp. 2d 690, 696 (D. Del. 1998) (holding that mere advertisements which are directed at a national audience and contain no pricing information are insufficient in and of themselves to constitute an "offer to sell").¹⁶

¹⁶ The Court observes that several of these cases involve the question of jurisdiction; however, they are intertwined with the concept of an "offer to sell" under Section 271(a) and their holdings are directed, at least in part, to the "offer to sell" question under Section 271(a). Accordingly, while jurisdiction is not the issue in this case, the Court finds these cases to be instructive on the "offer to sell" issue.

To bolster its documentary evidence, however, Lucent also directs the Court to the testimony of Professor Kabal suggesting that the 36121/36123 are manufactured by 3Com (Tr. 1088-1090), that Newbridge has rights to sell 3Com products (PX 2901; Tr. at 1083-84), that Newbridge has in fact sold 3Com "access" products (Tr. 1878, 1884), and that the subtitle of the 36121/36123 product is "Branch Access Concentrator." (PX 2500). After reviewing this evidence the Court cannot conclude that it is sufficient to support the jury's verdict. In the Court's view, the implied connection between the sale of the 3Com "access" product and the 36121/36123 "Branch Access Concentrator" is both too speculative and too tenuous to constitute sufficient evidence that the Branch Access Concentrator was offered for sale in the United States. However, even if this evidence was sufficient circumstantial evidence to establish the sale of Branch Access Concentrators in the United States, the Court notes that much of the testimony on this issue was the subject of a sustained objection. (Tr. 1089-91.) Accordingly, the Court concludes that Lucent failed to offer substantial evidence sufficient to support the jury's verdict as it pertains to infringement of the 36121 and 36123 products, and therefore, the Court will grant Newbridge's Motion for a judgment of non-infringement on the 36121 and 35123 products.

I. Whether Newbridge Is Entitled To A Judgement Of Noninfringement As A Matter Of Law Regarding The Arpin

'136 Patent

The jury returned a verdict in favor of Lucent on its claim that Newbridge induced infringement of Claim 10 of the Arpin '136 under the theories of both literal infringement and infringement under the doctrine of equivalents. By its Motion, Newbridge contends that Lucent failed to present sufficient evidence of direct infringement. Specifically, Newbridge contends that Lucent failed to show that Newbridge's products fulfill each step of claim 10 of the Arpin Patent, and Lucent failed to show that the claimed method was performed by anyone in the United States. In addition, Newbridge contends that Lucent failed to present sufficient evidence to support the jury's finding of infringement under the doctrine of equivalents, because Lucent's expert testimony from Dr. Baugh was directed solely at the issue of literal infringement and Lucent failed to conduct a hypothetical claim analysis. The Court will address each of Newbridge's arguments in turn.

1. Whether Lucent presented substantial evidence of direct infringement of claim 10 of the Arpin patent

By its Motion, Newbridge contends that Lucent failed to provide substantial evidence to establish that the accused Newbridge products fulfill each step of Claim 10 of the Arpin Patent. However, Newbridge specifically directs the Court to the first step of Claim 10:

storing in a system memory predetermined operating parameters **according to port circuit type code**, said predetermined operating parameters defining a plurality of features which can be performed by each port circuit in the system . . .

According to Newbridge, Lucent's expert addressed whether Newbridge products stored predetermined operating parameters, not whether those parameters were stored according to port circuit type code as Claim 10 requires.

In response, Lucent frames Newbridge's argument as an erroneous attempt to distinguish Newbridge products as using slot location for determining parameters rather than identification type code for determining parameters. However, Lucent contends that Newbridge products store operating parameters according to both identification type code parameters and slot location, and thus, Newbridge cannot avoid infringement because its product uses the claimed identification type code and merely adds an element of slot location. (D.I. 645 at 37). To this effect, Lucent relies on A.B. Dick Co. v. Burroughs Corp., 713 F.2d 700, 703 (Fed. Cir. 1983), for the proposition that infringement cannot be avoided "merely by adding elements if each element recited in the claim is found in the accused device."

In reply to Lucent's argument, Newbridge contends that Newbridge products do not store operating parameters by both slot location and identification type code. According to Newbridge, "[i]dentification type codes are stored in the same memory, but

the storage of one has nothing to do with the storage of the other." (D.I. 656 at 27). Newbridge maintains that in its products operating parameters are stored only according to slot location and contends that type codes are only used "to see whether the code from an installed card matches the stored code to confirm that the right kind of card has been installed." (D.I. 656 at 27).

After reviewing the testimony offered by Lucent on this issue, the Court concludes that Lucent failed to offer substantial evidence to support the jury's verdict regarding Claim 10 of the Arpin Patent. Although Dr. Baugh explained what an "identification-type code" is (Tr. 1252) and the fact that card slot position is important to finding the right parameters for a particular port circuit (Tr. 1255-256), Dr. Baugh's explanation was in the context of a description of the '136 Patent and communication systems in general and was not applied to the accused Newbridge products in particular. In addition, when asked about the way in which the operating parameters were stored in the memory of the accused Newbridge products, Dr. Baugh testified as follows:

Q: Do you know anything more than that, other than it would be ones and zeros? Do you know how the database in that memory [of the Newbridge 3600 product] was organized?

A: No. When you look at the claims of the '136 patent, the claims don't require that the information be organized in any particular way or

any particular structure. So the implementer of the invention has the option to implement that in a way that makes the most sense from a design perspective.

He can optimize a system design either from a cost point of view or a software complexity point of view to organize that anyway he wishes and still meet the claims.

Q: So you don't know how that information on the control card of the 3600 is organized in its database in the memory, is that right? Because you're saying it just doesn't matter how it's organized?

A: I remember looking at some code listing on the 3600 that gave some indication of the data structures associated with organizing the information. But offhand, I don't recall exactly how that data-or how those data structures were organized.

Q: In any event, your testimony is today that it really doesn't matter as long as the parameter information is somewhere in that memory and you can go get it; is that correct?

A: That's correct. The claims don't require a particular organization of information in memory or in the controller.

* * *

Q: I'm saying is the answer you just gave for the memory on the control card of the 3600, would your answer be the same for the memory on the -- associated with the controller for all of the Newbridge cards that you've testified about that--

A: And all the various products?

Q: Yes.

A: Yes, that would be true. That would be the same answer.

(Tr. 1371-1373) (emphasis added).

In support of its argument that substantial evidence supports the jury's verdict of infringement, Lucent contends that Newbridge's expert, Mr. Overton, "did not even attempt to contest this undisputable fact," i.e. that Newbridge products store operating parameters according to identification type code and slot location. However, a review of Mr. Overton's testimony indicates the contrary. Mr. Overton testified at length that Newbridge products have a data base that is organized according to physical slot location and that this slot location is used to access the database. (Tr. 2825-2827).

Having concluded that Lucent failed to present sufficient evidence to support the jury's verdict of literal infringement regarding Claim 10 of the '136 Patent, the Court need not consider Newbridge's remaining arguments on this issue. Because Lucent presented insufficient evidence to support a finding that Newbridge products infringe Claim 10, the Court cannot sustain the jury's verdict that Newbridge is liable for inducing others to infringe Claim 10 of the '136 Patent. Accordingly, the Court will grant Newbridge's Motion for a judgment of non-infringement as it relates to literal infringement of Claim 10 of the '136 Patent.

2. Whether Lucent presented substantial evidence of infringement of Claim 10 of the Arpin '136 Patent under the doctrine of equivalents

By its Motion, Newbridge also contends that Lucent failed to

present sufficient evidence to sustain the jury's verdict of infringement under the doctrine of equivalents of Claim 10 of the '136 Patent. Specifically, Newbridge contends that Dr. Baugh's testimony was solely directed to literal infringement, and Lucent failed to present a hypothetical claim analysis.

With regard to its argument that Lucent was required to perform a hypothetical claim analysis, Newbridge directs the Court to its previous argument in the context of Claim 12 of the Eckberg '810 Patent. For the reasons discussed previously by the Court, the Court rejects Newbridge's argument that Lucent was required to perform a hypothetical claim analysis.

As for Newbridge's remaining argument concerning the sufficiency of Lucent's evidence of infringement under the doctrine of equivalents, the Court has reviewed the evidence offered by Lucent and concludes that Lucent failed to present sufficient evidence to sustain the jury's finding of infringement of Claim 10 of the Arpin '136 Patent under the doctrine of equivalents. In the Court's view, Dr. Baugh's testimony on Claim 10 was directed solely to the question of literal infringement in that Dr. Baugh did not appear to give an element-by-element analysis under the doctrine of equivalents comparing Claim 10 to the accused products. It is well-established that "evidence and argument on the doctrine of equivalents cannot merely be subsumed in [a] plaintiff's case of literal

infringement." Lear Siegler, 873 F.2d at 1425. In addition, Lucent did not offer argument on the Arpin patent directed to the doctrine of equivalents in its closing argument. Accordingly, because Lucent failed to present sufficient evidence and argument to sustain the jury's finding that Newbridge induced infringement of Claim 10 of the Arpin '136 Patent under the doctrine of equivalents, the Court will grant Newbridge's request for a judgment of non-infringement on Claim 10 of the '136 Patent.

J. Whether Claims 7,8,9 And 16 Of The Cheng Patent Are Invalid As Anticipated As A Matter Of Law

By its Motion, Newbridge contends that the Cheng Patent is invalid as anticipated by two prior art references, the Namekawa Patent and the Rose Patent. Both the Namekawa Patent and the Rose Patent were disclosed to the PTO on the face of the Cheng '174 Patent. Thus, the parties' agree that the patents are properly considered prior art; however, they disagree as to whether these prior art patents render the Cheng Patent invalid.

As a general matter, for a patent to be invalid as anticipated under 35 U.S.C. § 102(g), the party challenging validity must show that the potentially invalidating patent or invention (1) qualifies as prior art; (2) was not abandoned suppressed or concealed; and (3) is identical to the claimed invention or process. Where, as here, the prior art in issue was already before the patent examiner, the burden of showing . . . invalidity . . . is especially difficult." Hewlett Packard Co.

v. Bausch & Lomb Inc., 909 F.2d 1464, 1467 (Fed. Cir. 1990).

In this case, the parties' arguments center on the issue of identity. To show identity between prior art and the claimed invention, the party challenging validity must show that each and every step or element of the claimed process or invention is disclosed in a single prior art reference or embodied in a single prior art device or practice, either expressly or inherently. Hazani v. United States International Trade Commission, 125 F.3d 1473, 1477 (Fed. Cir. 1997). For an element to be inherent in a prior art reference it must necessarily be present in the reference. Continental Can Co. v. Monsanto Co., 948 F.2d 1264, 1268 (Fed. Cir. 1991). As the Federal Circuit has explained:

Inherency may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient. If, however, the disclosure is sufficient to show that the natural result flowing from the operation as taught would result in the performance of the questioned function, it seems to be well settled that the disclosure should be regarded as sufficient.

Monsanto, 948 F.2d at 1268-1269. Whether a step or element is inherent in a prior art reference is a question of fact. Hazani, 126 F.3d at 1477.

A jury's verdict of patent validity, indicates that the jury found that no prior art reference completely embodied the method or apparatus of the claims at issue. Harmon, supra § 3.2 at 81. Absent special interrogatories, it is presumed from a general

verdict of patent validity, that the jury found differences between the claimed inventions and the prior art. Id. In reviewing a jury's verdict that a patent is not anticipated, the court must uphold the verdict if a reasonable jury could find that one or more elements of the patent claims are not found in the purportedly anticipatory reference. See Hazani, 126 F.3d at 147; Mycogen Plant Science, Inc. v. Monsanto Co., 61 F. Supp. 2d 199 (D. Del. 1999).

1. Whether Claims 7, 8, 9, and 16 of the Cheng patent are invalid because the claimed subject matter is anticipated by the Namekawa prior art patent

By its Motion, Newbridge contends that the Namekawa Patent, and in particular Figure 3, discloses each limitation of Claim 8 of the Cheng Patent. Accordingly, Newbridge contends that the Cheng Patent is invalid as anticipated as a matter of law.

In response to Newbridge's argument, Lucent contends that at least two critical elements of the Cheng patent are absent from the Namekawa reference. Specifically, Lucent contends that the error detecting circuit (EDC) means and the switch means of Claim 8 are not disclosed in the Namekawa Patent.

After reviewing the record evidence as it pertains to this issue, the Court concludes that sufficient evidence exists from which a reasonable jury could have concluded that neither the error detecting circuit means nor the switch means of Claim 8 are not found in the Namekawa Patent.

With regard to the "error detecting circuit means," the Court concluded that the function of the EDC means "is to detect one or more errors using the same error correction code used by the ECC." (D.I. 602 at 20). The Court also concluded that the structure associated with this function is the same syndrome circuit used by the ECC. (D.I. 602 at 20). Relying on the testimony of Dr. Wicker, Newbridge contends that the "burst error corrector" shown as element 17 of Figure 3 of the Namekawa Patent can be configured to operate as a detector.

In the Court's view, however, Dr. Wicker's testimony was not directed to the teachings of the Namekawa patent, but rather, to a hypothetical change that would have to be made to the Namekawa patent in order for the EDC means of the Cheng patent to be found in the Namekawa reference. In relevant part, Dr. Wicker testified, "Looking down here [at element 17 of Figure 3 of the Namekawa Patent], here is your burst error correct. If we say that it's a corrector that corrects zero errors, then it's a bur[st] error detector, an error detecting circuit." (Tr. 2051) (emphasis added).

Newbridge contends that "Lucent's own expert, Dr. Costello, testified that any error corrector must detect errors and, therefore, can be considered an error detector." (D.I. 656 at 32) (citing Tr. 787). According to Newbridge, Dr. Costello had to take this position to find infringement, because the Newbridge

products always correct detected errors. Thus, Newbridge contends that if the same claim construction is used for infringement as for validity, the claim if infringed, must be invalid.

After reviewing the testimony of Dr. Costello referenced by Newbridge, however, the Court disagrees with Newbridge's premise that any error corrector means must detect errors and therefore can be considered an error detector. Dr. Costello's testimony simply does not support that premise. For example, with regard to the ECC and EDC states in the Cheng Patent, Dr. Costello was asked and answered as follows:

Q: Now, you named the syndrome circuit for both the ECC state, the correction state, and the EDC state, the detection state, but wouldn't those two states have to be implemented by two different circuits?

A: No, that's not necessary. In fact, as shown here, this Figure 8 shows the syndrome circuit being shared. It's used when we're in detection state and it's also used when we're in correction state.

(Tr. 787). Thus, Dr. Costello did not testify that the ECC and the EDC were the same, but rather that they share the syndrome circuit.

Further, after reviewing the testimony of Dr. Costello as it pertained to the Namekawa reference, the Court concludes that sufficient evidence existed for the jury to conclude that the EDC means of Claim 8 was not present in the Namekawa reference. For example, Dr. Costello testified that the Namekawa system "uses

two correction circuits, one for random error and one for burst error." (Tr. 3293). Explaining how these correction circuits work in comparison to the patented system, Dr. Costello explained:

[T]he main goal in the patented system is to avoid miscorrections, particularly under bursty conditions as we discussed, those protection switching conditions. So whereas the patented system would just try to use its high detection capability, the Namekawa system uses a power burst error [corrector] system to try to correct it. So it still has the high probability of miscorrection and misdelivery.

(Tr. 3294). In sum, Dr. Costello's testimony supports Lucent's argument that the Namekawa patent's burst error corrector is not a detector, but rather a more powerful corrector than the random error corrector. Because the Court concludes that sufficient evidence exists from which a reasonable jury could have concluded that the Namekawa reference does not contain the EDC means disclosed in Claim 8 of the Cheng Patent, the Court concludes that Newbridge is not entitled to a judgment of invalidity as a matter of law on the Cheng Patent.

In addition to the EDC means, the Court also concludes that a reasonable jury could have concluded that the Namekawa reference does not contain the switching means of Claim 8 of the Cheng Patent. In construing Claim 8 of the Cheng Patent, the Court concluded that the function of the switch means was to "switch to and from the detection of errors in the ECC means and the detecting of errors in the EDC means" (D.I. 602 at 20). The

Court also concluded that the structure associated with this element of Claim 8 is the control unit 810 of Figure 8.

After reviewing the testimony on this issue, the Court cannot conclude that the jury's verdict was erroneous. As discussed previously, the jury would not have acted unreasonably if it accepted Dr. Costello's testimony regarding the absence of the error detecting circuit means in the Namekawa reference. Thus, based on this same testimony, the jury could have also reasonably found that the Namekawa reference lacked the ability to switch from correction to detection. Indeed, with respect to the "switching means," Dr. Costello testified that Namekawa switched from a random error corrector to a more powerful corrector, rather than from an error correction to high-power detection. In addition to the preceding quoted testimony which is relevant to this issue, Dr. Costello also testified as follows:

Both of those decoders [in the Namekawa patent] have high correction capability, so they don't have a high detection capability. There is no teaching in Namekawa of switching to a high-detection capability when errors are present, as there is in the '174 patent. On the contrary, Namekawa switches the other way. Namekawa, when the random error corrector in Namekawa is unable to handle a certain error, the Namekawa system switches to a more powerful corrector, a burst corrector. Whereas, the patent says switch to the opposite way, switch to a more powerful detection system. This is because Namekawa is concerned with correction [as much] as the system possibly can.

(Tr. 3293-3294).

Newbridge contends that the Cheng patent does not require switching from correction to high-power detection and such an element cannot be added to the Court's claim construction. However, a review of the Court's claim construction shows that this element is not added, but already encompassed in the Court's claim construction. As noted above, the Court found the switching means to be a switching from the error correction circuit (ECC) to the error detection circuit (EDC). Thus, Dr. Costello's testimony was not inconsistent with the Court's claim construction, and therefore, the Court concludes that sufficient evidence existed from which a reasonably jury could have concluded that the Namekawa reference lacked the switching means disclosed in Claim 8 of the Cheng Patent.

Because the Court concludes that a reasonable jury could have concluded that the Namekawa reference lacked each and every element of Claim 8 of the Cheng Patent, the Court likewise concludes that the jury could have found Claims 9 and 16 of the Cheng patent valid, because Claims 9 and 16 are dependent on Claim 8. See 35 U.S.C. § 112, ¶ 2 (dependent claims "incorporate by reference all of the limitations of the claim to which it refers"); In re Royka, 490 F. 2d 981, 983-984 (C.C.P.A. 1974) (recognizing that if an independent claim is not anticipated, it dependent claims are also not anticipated).

In addition, with regard to Claim 7, the Court observes that

Claim 7 is the method Claim that corresponds to the apparatus of Claim 8. Step (c) of Claim 7 is the method step that performs the actions of the "EDC means" of Claim 8, and steps (b), (d), and (f) of Claim 7 are the method steps corresponding to the "switch means" of Claim 8. Accordingly, for the reasons discussed in the context of Claim 8, the Court likewise concludes that a reasonable jury could have concluded that Claim 7 of the Cheng Patent was not anticipated by the Namekawa reference.

Because the Court concludes that a reasonably jury could have found that the Namekawa reference lacked each and every element of Claims 7, 8, 9 and 16 of the Cheng Patent, the Court concludes that the jury's verdict of validity regarding the Cheng Patent was reasonable. Accordingly, the Court will deny Newbridge's Motion for a judgment of invalidity regarding the Cheng Patent.

2. Whether Claims 7, 8, 9, and 16 of the Cheng patent are invalid because the claimed subject matter is anticipated by the Rose prior art patent

By its Motion, Newbridge also contends that the Rose patent discloses each and every limitation of Claim 8 of the Cheng Patent. Thus, Newbridge contends that because the Rose patent anticipates the Cheng Patent, the Cheng Patent is invalid as a matter of law.

Like its argument concerning the Namekawa reference, Lucent contends that the Rose Patent lacks the Cheng Patent's disclosed

"switching means." Specifically, Lucent contends that a reasonable jury could have concluded that the Rose patent switches from low-powered correction to high-power correction, rather than from correction to detection.

After reviewing the record as it relates to the Rose Patent, the Court concludes that a reasonable jury could have concluded that the Rose Patent lacks the switching means disclosed in the Cheng Patent. In discussing the differences between the Rose Patent and the Cheng Patent, Dr. Costello explained:

When errors are detected here, what the Rose system does is it switches over to a second. Here is the switching here indicated, it switches over to a second decoder, which has correction capabilities.

Now, remember what happens in the patented system when errors are detected, it switches out of correction and tries to just do detection, otherwise switches to a high detecting capability.

Rose, again as Namekawa is switching in the opposite direction, when errors are detected here, the Rose system switches to a higher error corrector. So its too [sic] try to correct and not so much avoid missed corrections.

(Tr. 3296-3297).

To the extent that Newbridge reiterates its argument that the Court's claim construction does not require switching from error correction to error detection, the Court rejects Newbridge's argument for the reasons discussed previously in the context of the Namekawa patent. Because the Court concludes that a reasonable jury could have concluded that the Rose patent does

not contain the switching means disclosed in Claim 8 of the Cheng patent, the Court likewise concludes that a reasonable jury could have reached the same conclusion regarding dependent Claims 9 and 16 and related Claim 7 of the Cheng Patent, as all of these claims also involve Claim 8's disclosed switching means. Accordingly, because a reasonable jury could have concluded that each and every element of the Cheng Patent was not disclosed in the Rose prior art reference, the Court concludes that Newbridge is not entitled to a judgment of invalidity regarding the Cheng Patent.

K. Whether Claim 10 Of The Arpin Patent Is Invalid As Anticipated As A Matter Of Law

By its Motion, Newbridge contends that Claim 10 of the Arpin Patent is invalid as anticipated by two prior art references, the Mitel SX-2000SG system and the CXC ROSE PBX. Newbridge's claim of invalidity was raised as a defense to infringement, and not as a declaratory judgment counterclaim. Because the Court has concluded that Newbridge is entitled to a judgment of non-infringement as a matter of law regarding Claim 10 of the Arpin Patent, the Court declines, at this juncture, to address Newbridge's validity defense.

L. Whether Newbridge Is Entitled To Judgment As A Matter Of Law That Sales Of Certain Noninfringing Software Should Not Have Been Included In The Damages Base

By its Motion, Newbridge contends that Lucent failed to offer sufficient evidence to support the jury's verdict that

Lucent was entitled to royalty damages for the sale of two products sold under the product designations 4602 and 46020. According to Newbridge, neither of these software products was alleged to infringe the patents-in-suit, and Lucent's damages expert relied on the untrue assumption that these software products are necessary for the operation of the products that the jury found infringed the '810 and '811 Patents.

In response to Newbridge's argument, Lucent contends that the jury's damages award properly considered the sales of the 4602 and 46020 software products based on the "entire market value rule." According to Lucent, "the entire market value rule does not require that an unpatented item be necessary for the patented product to operate." (D.I. 645 at 53). Rather, Lucent contends that the appropriate inquiry is whether Newbridge would have anticipated an increase in sales of the unpatented software because of the patented device of which it was a part.

The entire market value rule allows a patentee to recover damages "based on the value of an entire apparatus containing several features, when the feature patented constitutes the basis for customer demand." TWM Manufacturing Co., Inc. v. Dura Corp., 789 F.2d 895, 901 (Fed. Cir. 1986) (citations omitted). Stated another way, "[w]here a hypothetical licensee would have anticipated an increase in sales of collateral unpatented items because of the patented device, the patentee should be

compensated accordingly." Id.

Typically, the entire market value rule has been applied when the unpatented and patented features are physically part of the same device. Rite-Hite Corp. v. Kelley Company, Inc., 56 F.3d 1538, 1549 (Fed. Cir. 1995) (citations omitted). However, the rule has also been extended to allow the inclusion of unpatented components which are physically separate from the device if the unpatented components are normally sold with the patented components and are either considered to be components of a single assembly or parts of a complete machine, or they together constitute a single functional unit. See Paper Converting Machine Co. v. Magna-Graphics Corp., 745 F.2d 11, 23 (Fed. Cir. 1984); Kalman V. Berlyn Corp., 914 F.2d 1473, 1485 (Fed. Cir. 1992). Thus, application of the entire market value rule is only appropriate where there is a functional relationship between the noninfringing components and the patented invention. Rite-Hite Corp., 56 F.3d at 1550. In other words, the noninfringing components must be sold together with the patented device for more than reasons of mere convenience or business advantage. Id.

After reviewing the evidence as it relates to this issue, the Court concludes that Lucent presented sufficient evidence to sustain the jury's award of royalty damages on Newbridge's 4602 and 46020 software products. As articulated above, the test for

the application of the entire market value rule is not whether the unpatented products are necessary for the device to operate as Newbridge contends, but whether a hypothetical licensee would have anticipated an increase in sales of collateral unpatented items because of the patented device. In this case, Lucent presented evidence that the 4602 and 46020 software products perform an important function in connection with the switches that were found to infringe the '810 and '811 patents. Lucent's evidence demonstrated that customers utilize the 4602 and 46020 software products to set the patented congestion management features of the '810 and '811 patents, and that customers are unlikely to utilize any other method to set those parameters. (Tr. at 675-676). In addition to its functional importance to the patented device, Lucent also presented testimony demonstrating that Newbridge anticipated an increase of sales in the 4602 and 46020 software products because of the infringing switches. For example, Richard Berger, the former Vice President of Sales in the United States for Newbridge, provided the following testimony regarding the 46020 software:

Q: Do you know if you can use the 46020 network management with a competing ATM switches?

A: Non-Newbridge? Not that I'm aware of.

Q: In fact, one of the big selling points of the 46020 from Newbridge would be the fact that once you have that in place at the customer they would likely come back and buy Newbridge switches, correct?

A: Yes.

Q: Another advantage of the 46020 software is that it's sold at a premium as compared to the switches themselves. Isn't that correct?

A: It depends.

Q: Usually it is; correct.

A: Usually it is.

(Tr. 1893).

The importance of the 46020 software to the operation of the 36170 switches was further demonstrated by Mr. Berger's testimony that in order to operate the 36170 without using the 46020 software, a field engineer would have to manually set up the 36170 at the site. (Tr. 1894). In addition, while Mr. Berger acknowledged that there could be people attempting to sell other systems, Mr. Berger testified that in actuality, he was unaware of any customers operating a 36170 switch on a daily basis without using the 46020. (Tr. 1894).¹⁷

Newbridge also contends that it was improper for the jury to include the 4602 and 46020 software in the royalty base, because the 4602 and 46020 products are not necessarily sold together. However, Newbridge presented no evidence on how many, if any, of the infringing products were purchased with or without the

¹⁷ Mr. Berger also testified that the 4602 was the predecessor to the 46020. (Tr. 1894). Accordingly, in the Court's view, Mr. Berger's testimony regarding the 46020 is instructive as to the role of the 4602, as well.

software in question. Newbridge contends that such evidence was not its responsibility to present. However, the Federal Circuit has recognized that where the plaintiff has shown the propriety of applying the entire market value rule and the defendant fails to offer evidence of apportionment, it is appropriate to include the unpatented items in the royalty base. TWM Mfg., 789 F.2d at 901 (holding that special master correctly included unpatented items in royalty base, where defendant failed to show how many, if any, of the patented devices were sold alone, without the non-patented items). Accordingly, in this case, the Court cannot conclude that the jury erred in accepting the apportionment of the sales of the 4602 and 46020 products offered by Lucent's expert, Ms. Julie Davis.

In sum, the Court concludes that Lucent presented sufficient evidence for a reasonable jury to conclude that there was an important functional relationship between the 46020 and 4602 software and the switches that infringe the '810 and '811 patents and that Newbridge expected an increase in sales of these software items because of the patented device. Accordingly, the Court concludes that sufficient evidence supports the jury's award of royalty damages which included the 4602 and 46020 in the royalty base, and therefore, the Court will deny Newbridge's motion for judgment as a matter of law on this issue.

M. Whether Newbridge Is Entitled To Judgment As A Matter Of Law On Its License Defense Based On License Agreements Between Lucent And Newbridge's Vendors

By its Motion, Newbridge next contends that it is entitled to judgment as a matter of law with respect to Lucent's infringement claims to the extent that they are directed to features performed by semiconductor chips ("ASIC's") purchased by Newbridge from vendors licensed by Lucent for the patents-in-suit. In support of its Motion, Newbridge relies on the testimony of Newbridge employee, Natalie Giroux, that the functions allegedly covered by the patents in this case are performed by chips from various vendors like VLSI Technologies, Inc., Kawasaki Steel, LSI Logic, Siemens and Texas Instruments all of which have license agreements with Lucent. According to Newbridge, these license agreements give the vendors the right to make and sell the chips that Newbridge uses to perform the functions which allegedly infringe the Eckberg '810 and '811 Patents and the Cheng Patent. As a customer of these vendors, Newbridge further contends that it is authorized under the terms of these license agreements to use and resell the licensed product.

In response to Newbridge's argument, Lucent contends that the jury appropriately concluded that the chips Newbridge purchases from allegedly licensed vendors do not contain all the elements of the asserted claims of the patents-in-suit, and

therefore, cannot form the basis of an implied license defense. To this effect, Lucent specifically contends that there was a sufficient basis for the jury to reject Ms. Giroux's testimony, and such a decision was within the jury's sole province.

The grant of a patent gives the patent owner the right to exclude others from making, using or selling the patented invention. 35 U.S.C. § 154. However, the patent owner may waive these rights either expressly or impliedly by granting another a license to make, use or sell the patented invention. The Carborundum Co. v. Molten Metal Equipment, 72 F.3d 872, 878 (Fed. Cir. 1995). The existence of an implied license is an affirmative defense to an action for patent infringement, and the party asserting this defense has the burden of establishing that an implied license exists under the facts of the case. Id.

An implied license may arise by acquiescence, conduct, equitable estoppel or legal estoppel. Wang Laboratories, Inc. v. Mitsubishi Electronics America, Inc., 103 F.3d 1571 (Fed. Cir. 1997). Generally, there are two requirements to find an implied license (1) "the equipment involved has no non-infringing uses;" and (2) "the circumstances of the sale 'plainly indicate that the grant of a license should be inferred.'" Met-Coil Systems Corp. v. Korner Unlimited, Inc., 803 F.2d 684 (Fed. Cir. 1986) (citations omitted).

In this case, Newbridge's implied license defense is based

on license agreements between Lucent and Newbridge vendors who supplied Newbridge with the allegedly infringing semiconductor chips. Consistent with Newbridge's implied license theory, the Court instructed the jury:

If you find that Newbridge has proven by a preponderance of the evidence that its supplier has a license to Lucent's five data-networking patents that covers the component sold to Newbridge and that the component purchased by Newbridge has no non-infringing uses and the circumstances of the sale of the component to Newbridge plainly indicate that a grant of a license to Newbridge to use the purchased component should be inferred, then you cannot find Newbridge liable for infringement of the method claims of patents licensed to the supplier.

(D.I. 602 at 42).

In support of its implied license defense, Newbridge introduced the patent license agreements between Lucent and the Newbridge suppliers. In addition, Newbridge presented the testimony of its employee, Natalie Giroux, to establish that the allegedly infringing functions in the Newbridge systems were performed by chips supplied by these licensed vendors, and thus, Newbridge's use of these chips was within the purview of its vendors' license agreements. In rejecting Newbridge's argument, the jury necessarily rejected Ms. Giroux's testimony and concluded, contrary to Newbridge's assertion, that the chips Newbridge purchases from the allegedly licensed vendors did not contain all of the elements of the asserted claims of the patents in suit.

In evaluating a motion for judgment as a matter of law, the Court cannot consider the credibility of witnesses or substitute its judgement for that of the jury. Rather, the Court must only consider whether the jury's verdict was reasonable in light of the evidence. After reviewing the testimony of Ms. Giroux on both direct and cross-examination, the Court cannot conclude that the jury erred as a matter of law in rejecting her testimony. Although Ms. Giroux testified on direct examination that in her view each of the asserted claims of the patents were found on the chips supplied by the Newbridge vendors, the jury may not have credited her testimony based on her cross examination by Lucent which controverted several of the assertions in her direct testimony, revealed her lack of experience in ASIC technology and emphasized the fact that she had no experience with that technology prior to the litigation in this case. For example, based on Ms. Giroux's testimony, Newbridge argues that all of the elements of the asserted claims of the '811 patent are present on the Diablo, Stealth, Eagle, NSX and Centurion chips. However, on cross-examination, Ms. Giroux's testimony on this issue was undercut by her admission that the ASICs lacked certain functions and her concession that the ASICs do not contain all of the elements of Claim 12 of the Eckberg '811 Patent. (Tr. 3140-3141). Because the Court cannot conclude that the jury erred in rejecting Ms. Giroux's testimony, the Court cannot conclude that

Newbridge was entitled to judgment as a matter of law on its implied license defense.

N. Whether Newbridge Is Entitled To Judgment As A Matter Of Law On Its License Defense Based On License Agreements Between Lucent And Newbridge's Customers

Newbridge next contends that it is entitled to judgment as a matter of law on its license defense based on license agreements between Lucent and Newbridge's customers, the Regional Bell Operating Companies ("RBOC's") consisting of Bell Atlantic, Bell South, Southwestern Bell, Pacific Telesis, US West and Ameritech. In addition, Newbridge contends that it is entitled to judgment as a matter of law regarding all sales by Newbridge to Lucent or its corporate predecessor, AT&T, on the ground that the sales were expressly or impliedly authorized by the patentee. (D.I. 628 at 68).

Lucent does not contest that these entities have express licenses with Lucent for the patents in question. However, in response to Newbridge's argument, Lucent contends that "Newbridge introduced no evidence at trial that it made any sales to any licensed customer, much less any evidence quantifying those sales." (D.I. 645 at 57) (emphasis in original). In addition, based on the Court's jury instruction regarding express license, Lucent contends that Newbridge failed to introduce any evidence

regarding specific "transactions involving manufacture, sale, offer for sale or importing of equipment to any such licensed customer." (D.I. 602 at 41).¹⁸

In reply to Lucent's argument, Newbridge contends that its motion for judgment as a matter of law is directed to the jury's special interrogatory response to interrogatory number 33.¹⁹ In

¹⁸ Regarding the express license defense, the Court instructed the jury as follows:

[I]nfringement occurs where a person practices a claimed invention without authority from the patent owner. If, however, a person has a license to practice the invention, there can be no liability for infringement. By the same token, if there is no liability for a direct infringement, a party cannot be liable for inducing that infringement.

In this case, Newbridge contends that a number of its customers have express licenses from Lucent to use equipment and to use methods, falling within the scope of the patents-in-suit. If you find that Newbridge has proven the existence of such express licenses by a preponderance of the evidence, then you cannot find that Newbridge is infringing method claims with respect to transactions involving manufacture, sale, offer for sale or importing of equipment to any such licensed customer. This has no bearing on apparatus claims.

(D.I. 602 at 41).

¹⁹ The jury interrogatory related to Newbridge's express license defense stated:

33. Do you find that "Newbridge" has proved, by a preponderance of the evidence, that it has made sales of any accused products to any Regional Bell Operating Companies with licenses to practice any of the method claims of Lucent's patents-in-suit? (A "YES" answer is a find for "Newbridge." A "NO" answering [sic] is a find for Lucent.)

addition, Newbridge contends that it did introduce evidence that it made sales to licensed customers. In support of its assertion, Newbridge directs the Court to the testimony of Natalie Giroux.

Like an implied license, the existence of an express license is an affirmative defense to infringement. The burden of proof regarding this defense rests on the party asserting it. The Carborundum Co., 72 F.3d at 878. Newbridge directs the Court to the testimony of Natalie Giroux for the proposition that Newbridge established that it "sells its products to all of the RBOC's." (D.I. 656 at 48). However, after reviewing the testimony of Ms. Giroux as it relates to this issue, the Court concludes that Ms. Giroux's testimony is insufficient to warrant judgment as a matter of law in favor of Newbridge. On this issue, Ms. Giroux testified as follows:

Q: Have you heard the term RBOC or Regional Bell Operating Company?

A: Yes, I have.

Q: What does that mean?

A: These are the small operating companies that are scattered throughout the United States. I believe they came out of the break up of AT&T.

Q: And those are all customers of Newbridge, are they not?

In response to this interrogatory, the jury answered "NO." (D.I. 604 at 14).

A: That is correct.

Q: Do you remember the names of the RBOC?

A: There is Ameritech, Bell South, Bell Atlantic, Pacific Telesystems, and US 1.

(Tr. 3124).

Significantly absent from Ms. Giroux's testimony is any evidence establishing that Newbridge sold the *accused products* to these entities. That these entities may have been customers of Newbridge is not the inquiry. The relevant inquiry to establish Newbridge's express license defense is whether the *accused products* were sold to these licensed customers. Indeed, even if the Court were to divorce its jury instruction from the related jury interrogatory, and examine only the jury interrogatory as Newbridge requests, the crux of the matter is still whether Newbridge proved that "it has made sales of any accused product" to any RBOC." (D.I. 604 at 14) (emphasis added). Because Newbridge failed to introduce any evidence establishing that Newbridge sold the accused products to licensed customers, including Lucent and AT&T, the Court cannot conclude that the jury's verdict was unsupportable. Accordingly, the Court will deny Newbridge's request for judgment as a matter of law based on an express license defense.

O. Whether Newbridge Is Entitled To Judgment As A Matter Of Law That The Asserted Claims Of The Cheng And Arpin Patents Are Indefinite

By its Motion, Newbridge requests the Court to grant

judgment as a matter of law that the asserted claims of the Cheng and Arpin patents are invalid by reason of indefiniteness. Specifically, Newbridge contends that (1) the testimony of the inventors reveals that they subjectively do not understand the invention taught by the claims, and (2) the language of the claims is objectively indefinite. In addition, Newbridge contends that the Court erred by submitting the question of indefiniteness to the jury, because indefiniteness is a question of law for the Court to decide.

1. Whether the Court erred in submitting the question of indefiniteness to the jury

By its Motion, Newbridge contends that the Court erred in submitting the question of indefiniteness to the jury, because indefiniteness is a question of law. Specifically, Newbridge contends that any jury verdict regarding indefiniteness is tainted, because the Court's claim construction ruling, to the extent that it interpreted terms Newbridge argued were indefinite, prejudiced the jury who may have inferred that the Court did not agree with Newbridge's indefiniteness contention.²⁰

In response to Newbridge's argument, Lucent agrees that indefiniteness is a question of law, but contends that factual questions underlie the indefiniteness inquiry such that it was

²⁰ In the Court's view, the jury's verdict of noninfringement of Claims 1 and 4 of the Arpin '136 patent undermines this contention.

appropriate for the Court to submit the indefiniteness question to the jury. Because the jury properly rendered a verdict on indefiniteness, Lucent contends that the jury's verdict on indefiniteness is entitled to deference.

The statutory basis for the indefiniteness defense is 35 U.S.C. § 112, ¶ 2, which provides in pertinent part that "[t]he specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention." In concluding that indefiniteness is a question of law which must be considered de novo by a reviewing court, the Federal Circuit recognized the connection between claim construction and the indefiniteness inquiry. According to the Federal Circuit, "A determination of claim indefiniteness is a legal conclusion that is drawn from the court's performance of its duty as the construer of patent claims." Personalized Media Communications, LLC v. International Trade Commission, 161 F.3d 696, 702-703 (Fed. Cir. 1998).

While recognizing that indefiniteness is a question of law, several courts, including this Court, have also noted that factual questions may underlie the indefiniteness inquiry. See System Management Arts Inc. v. Avesta Technologies, Inc., 137 F. Supp. 2d 382, 399-400 (S.D.N.Y. 2001) (collecting cases); E.I. DuPont de Nemours & Co. v. Millenium Chem., Inc., 1999 WL 615164, *3 (D. Del. Aug. 2, 1999) (Robinson, J.); LNP Engineering

Plastics, Inc. v. Miller Waste Mills, Inc., 77 F. Supp. 2d 514, 549-550 (D. Del. 1999) (McKelvie, J.).²¹ But see Exxon Research & Engineering Co. v. United States, 54 U.S.P.Q.2d 1519, 1520 (Fed. Cl. Ct. 2000). Indeed, even the Federal Circuit itself has recognized that some legal questions may involve factual underpinnings. System Management, 137 F. Supp. 2d at 400 (citing Union Pacific Res. Co. v. Chesapeake Energy Corp., 236 F.3d 684 (Fed. Cir. 2001) for proposition that patent enablement is legal question but "[a]s is often true of legal questions . . . the ultimate legal conclusion of enablement rests on factual underpinnings . . ."). Accordingly, the Court cannot conclude that it was error to submit the indefiniteness question in this case to the jury.

However, even if the Court's decision to submit this question to the jury was error, the relief Newbridge requests is that the Court review the indefiniteness question de novo without deferring to the jury's verdict. Accordingly, to avoid any error

²¹ Newbridge discounts LNP Engineering, because the case was tried prior to the Federal Circuit's decision in Personalized Media, even though the decision was issue more recently. However, this Court's decision in Millennium Chemicals was rendered subsequent to Personalized Media and involved motions which appear to have been filed after the decision in Personalized Media. 1999 WL 615164 at *4. Further and in any event, the Southern District of New York's decision in System Management expressly considered the impact of Personalized Media, yet recognized that the indefiniteness inquiry may still involve factual underpinnings. 137 F. Supp. 2d at 399-401 (denying summary judgment because genuine issue of material fact existed on question of indefiniteness).

on appeal which might result from the Court's deference to the jury verdict, the Court will review the indefiniteness question de novo.

2. Applicable law on Indefiniteness

An issued patent is presumed valid. See 35 U.S.C. § 282. In order to overcome this presumption, the party challenging validity bears the burden of proof by clear and convincing evidence that the invention fails to meet the requirements of patentability.²² Hewlett-Packard Co. v. Bausch & Lomb, 909 F.2d 1464, 1467 (Fed. Cir. 1990). A patent satisfies the definiteness requirement if "those skilled in the art would understand what is claimed when the claim is read in light of the specification." Orthokinetics, Inc. v. Safety Travel Chairs, Inc., 806 F.2d 1565, 1576 (Fed. Cir. 1986). "Furthermore, a patent need not teach, and preferably omits, what is well known in the art." Hybritech, Inc. v. Monoclonal Antibodies, Inc., 802 F.2d 1367, 1384 (Fed. Cir. 1986).

3. Whether the pertinent claims of the Cheng and Arpin Patents are invalid as indefinite

In challenging the Cheng and Arpin Patents on the basis of

²² Interestingly, even the Exxon court, which concluded that indefiniteness does not involve any factual questions, recognized the "interesting academic question" posed by the burden of proof, specifically: "[H]ow can the moving party present 'evidence' that rises to the level of 'clear and convincing evidence' if indefiniteness is a question of law?" 46 Fed. Cl. at 283, n.5.

indefiniteness, Newbridge contends, as a threshold matter, that Section 112 ¶ 2 imposes a subjective requirement that an inventor particularly point out and distinctly claim the subject matter which the applicant regards as his invention. Newbridge contends that the co-inventors of the Cheng '174 patent, Cheng and Dravida, testified that they did not understand the claim language (Tr. at 1792-94; 1908), could not identify sufficient structure for the means-plus-function elements in the claims, (Tr. at 1786-87; 1790; 1792) and could not link structure in the specification with the function described in the means-plus-function elements. (D.I. 628 at 70-75.) According to Newbridge, the co-inventors of the Arpin '174 patent demonstrated similar difficulties. (D.I. 628 at 75-76.)

In briefing, at oral argument, and in subsequent submissions, the parties have sharply disagreed as to whether the indefiniteness inquiry requires a subjective component. The parties' dispute centers on two Federal Circuit cases, Solomon v. Kimberly-Clark Corp., 2000 WL 867589 (Fed. Cir. June 30, 2000) and Voice Technologies Group v. VMC Systems, Inc., 164 F.3d 605, 615 (Fed. Cir. 1999).

According to Lucent the Solomon decision holds that the inventor's subjective understanding of the invention is only relevant during the prosecution of the patent before the PTO. Once the patent issues, Lucent contends that the indefiniteness

inquiry becomes solely an objective inquiry.

In contrast, Newbridge contends that Solomon confirms its view that indefiniteness requires a subjective component. To the extent that Solomon can be read as holding that an inventor is not competent to testify to the meaning of claim terms, Newbridge contends that Solomon is inconsistent with and directly conflicts with the Federal Circuit's existing precedent in Voice Technologies. Because Solomon was not an en banc decision, Newbridge contends that it cannot overrule Voice Technologies, which, according to Newbridge, holds that an inventor is a competent witness as to the scope and meaning of the claims.

The Court disagrees with Newbridge on both points. Both Voice Technologies and Solomon are concerned with the role of an inventor's subjective understanding of the invention as compared with the objective understanding of the invention by one skilled in the art. However, in the Court's view, Solomon is not inconsistent with Voice Technologies as Newbridge contends, and Solomon does not stand for the proposition that the indefiniteness inquiry turns on the inventor's subjective understanding of the claimed invention.

In Voice Technologies, the Federal Circuit discussed the role of inventor testimony in claim construction determinations. Voice Technologies sued VMC in common law tort asserting that letters sent by VMC to Voice Technologies' customers charging

infringement of VMC's patent resulted in compensable harm. VMC counterclaimed alleging infringement of the '124 patent and Voice Technologies responded with non-infringement and patent invalidity defenses. Voice Technologies, 164 F.3d at 608.

In the course of pre-trial procedures, the parties presented various claim construction issues to the trial court. Voice Technologies supported its claim construction position with affidavits from an expert witness and Voice Technologies's executive vice-president. Id. at 609-10. In response to Voice Technologies, VMC submitted the depositions of several employees and a declaration by Oshima, a co-inventor of the '124 patent. However, the trial court excluded Oshima's declaration as a subjective, unreliable, and "after the fact" attempt to construe a claim by the inventor. In addition, the trial court noted that the Oshima declaration listed no qualifications that would allow the trial court to consider Oshima to be an expert or one skilled in the relevant art. Id. at 611. Following its claim construction, the trial court granted summary judgment in favor of Voice Technologies on the grounds of non-infringement, and VMC appealed. Id.

On appeal, the Federal Circuit reversed the district court's summary judgment decision. Specifically, the Federal Circuit found that the Oshima declaration revealed ambiguities in the analyses of Voice Technologies' experts, and should have been

considered. In so doing, the Federal Circuit expressed concern that its Markman decision might have led the trial court to improperly exclude Oshima's declaration during claim construction. To this effect, the Federal Circuit explained that the language in Markman that "the subjective intent of the inventor is of little or no probative weight in determining the scope of the claim" was not meant to serve as a blanket declaration disqualifying inventor testimony. Rather, the Federal Circuit's clarified that its holding in Markman was meant to prohibit the use of inventor testimony to change the scope and meaning of the claims after the patent issued, and not to preclude the inventor from explaining the technology, what was invented and what was claimed by the patent when it was drafted. Id. at 615. As the Federal Circuit explained:

Patents are written not for laymen, but for and by persons experienced in the field of the invention. An inventor is a competent witness to explain the invention and what was intended to be conveyed by the specification and covered by the claims. The testimony of the inventor may also provide background information, including explanation of the problems that existed at the time the invention was made and the inventor's solution to these problems.

Id.

Like Voice Technologies, the Federal Circuit in Solomon reversed the district court's grant of summary judgment based in part on the district court's improper use of inventor testimony. In Solomon, the inventor of the patent, Sandra Solomon, testified

in a deposition that the depression limitation in the claimed invention, a disposable menstrual panty, was made of material having a uniform, rather than varying, thickness. 216 F.3d at 1376. However, Solomon's description was contrary to the construction adopted by the trial court and affirmed by the appellate court that "depression" meant a portion "formed by surrounding a region of substantially thinner material with a region of thicker material." Id. (citations omitted). Based on the conflict between Solomon's deposition testimony and the claim construction, the district court concluded that Solomon's patent did not accurately depict her invention, and therefore, the patent was invalid as a matter of law under Section 112, Paragraph 2. Id.

Reviewing the district court's decision on invalidity, the Federal Circuit began its analysis with a recitation of the two components required for an indefiniteness inquiry under Section 112, Paragraph 2. Specifically, to comply with Section 112, Paragraph 2, the claim must (1) "set forth what 'the applicant regards as his invention,'" and (2) set forth the invention with "sufficient particularity and distinctness, i.e. the claim must be sufficiently 'definite.'" Id. at 1377 (citations omitted). Expanding on what is required in an indefiniteness inquiry, the Federal Circuit explained that the scope of evidence properly considered in determining indefiniteness turns on whether the

claim is part of a patent application during prosecution before the PTO or whether the claim is part of an already issued patent. To this effect, the Federal Circuit explained that during the prosecution of a patent application, a claim's compliance with the two components of Section 112 Paragraph 2, "may be analyzed by consideration of evidence beyond the patent specification, including statements by the inventor to the Patent and Trademark Office." Id. According to the Federal Circuit such evidence is important during the patent's prosecution, because during patent prosecution and examination "the pending claims must be interpreted as broadly as the terms reasonably allow." Id. at 1378 (quoting In re Zletz, 893 F.2d 319, 321-322 (Fed. Cir. 1989)). Thus, the applicant's understanding of the claims during prosecution is necessary "to achieve a complete exploration of the invention and its relation to the prior art," so that the claims can be amended as necessary to clarify their meaning, ensure their precision and remove any uncertainties as to the scope of the claims. Id.

However, during a validity inquiry in which a court analyzes "issued claims" for compliance with Section 112, Paragraph 2, the Federal Circuit stated that the range of evidence considered by the reviewing court should be more limited. Id. at 1378-1379. To this effect, the Federal Circuit observed that once the patent issues, the claim language is fixed such that the claims are no

longer construed as broadly as reasonably possible, and therefore, "what the patentee subjectively intended the claims to mean is largely irrelevant to the claim's objective meaning and scope." Id. at 1379 (citing Markman, 52 F.3d at 985-986). In other words, the Federal Circuit emphasized that insofar as issued claims are concerned, the focus is "whether the claims, as interpreted in view of the written description, adequately perform their function of notifying the public of the patentee's right to exclude." Id. (citations omitted). Stated another way, once the patent is issued, it is the language contained in the patent that is used by the public to measure the scope of the patentee's right to exclude, and not the meanings or thoughts in the inventor's head.

Newbridge seizes on the language in Solomon that indefiniteness is a two-part inquiry for its proposition that indefiniteness involves a subjective component. However, as the Court's discussion of Solomon indicates, the Federal Circuit went on to point out that the inventor's subjective perspective, while important during patent prosecution, is largely irrelevant in the context of issued claims facing invalidity on the grounds of indefiniteness. In pertinent part, the Federal Circuit expressly stated:

It is particularly inappropriate to consider inventor testimony obtained in the context of litigation in assessing validity under section 112, paragraph 2, in view of the absence of probative value of such

testimony. In Markman, we addressed the closely related issue of litigation-derived inventor testimony in the context of claim construction, and concluded that such testimony is entitled to little, if any, probative value. . . . We find this analysis equally compelling in the present context, as the determination of whether a claim complies with section 112, paragraph 2, is "drawn from the court's performance of its duty as the construer of patent claims." (citations omitted). Although we recognize that "which the applicant regards as his invention" is subjective language . . . once the patent issues, the claims and written description must be viewed objectively, from the standpoint of a person skilled in the art. For the foregoing reasons, we conclude that inventor testimony, obtained in the context of litigation, should not be used to invalidate issued claims under section 112, paragraph 2.

216 F.3d at 1379-1380 (emphasis added). Accordingly, based on Solomon, the Court rejects Newbridge's argument that the defense of invalidity based on indefiniteness requires the Court to consider the subjective understanding of the inventor.

As for Newbridge's argument that Solomon is inconsistent with Voice Technologies, the Court also disagrees. First, the Voice Technologies court did not address the indefiniteness inquiry under Section 112, Paragraph 2, and therefore, it cannot stand in direct conflict with that which it does not address. Second, and consistent with Solomon and Markman, the Voice Technologies court recognized that, while the inventor is not per se disqualified from testifying during claim construction, a process involving already issued claims, the inventor's testimony has a more limited role:

[T]he inventor can not by later testimony change the

invention and the claims from their meaning at the time the patent was drafted and granted. Patents are written not for laymen, but for and by persons experienced in the field of the invention. An inventor is a competent witness to explain the invention and what was intended to be conveyed by the specification and covered by the claims. The testimony of the inventor may also provide background information, including explanation of the problems that existed at the time the invention was made and the inventor's solution to these problems.

Voice Technologies, 164 F.3d at 615-16 (citations omitted)

(emphasis added). Stated another way, the Voice Technologies court, like the Solomon court, supported the objective use of the inventor's testimony as one skilled in the art to explain the invention and its background information. However, the Voice Technologies court did not support the subjective use of the inventor's testimony to change the meaning or scope of the claims. Indeed, to read the Voice Technologies opinion differently would be to contradict the Federal Circuit's en banc decision in Markman:

No inquiry as to the subjective intent of the applicant or PTO is appropriate or even possible in the context of a patent infringement suit. The subjective intent of the inventor when he used a particular term is of little or no probative weight in determining the scope of a claim (except as documented in the prosecution history). . . . While presumably the inventor has approved any changes to the claim scope that have occurred via amendment during the prosecution process, it is not unusual for there to be a significant difference between what an inventor thinks his patented invention is and what the ultimate scope of the claims is after allowance by the PTO.

Markman, 52 F.3d at 985 (emphasis added). Thus, while Voice Technologies explained that inventor testimony may be admitted

for certain limited purposes, it did not hold that the court must give inventor testimony controlling effect or that such testimony can be used to contradict the meaning of the claim language. Accordingly, the Court rejects Newbridge's argument that the holdings of the Federal Circuit in Solomon should be disregarded as inconsistent with Voice Technologies. Having concluded that an objective inquiry is necessary for the Court to determine whether the Cheng and Arpin patents are indefinite, the Court will turn to the ultimate question of whether these patents are invalid as indefinite.

With regard to the Cheng Patent, Newbridge contends that the Cheng Patent is indefinite as a matter of law, because the coinventors of the patent could not (1) understand the claim language, (2) identify sufficient structure for the means-plus-function elements in the claims, and (3) link structures in the specification with the functions described in the means-plus-function elements. After reviewing the record as a whole as it relates to the Cheng Patent, with special emphasis on the claim language and specification, the Court cannot conclude that Newbridge has met its burden of establishing indefiniteness by clear and convincing evidence. Newbridge urges the Court to conclude that the patent is indefinite, because its co-inventors, Cheng and Dravida, had difficulty testifying about the structures in the claims and their understanding of the claim language.

However, a closer review of their testimony indicates that while they may not have understood the legal terminology associated with the claims, but they did have an understanding of the claims as a technical matter. (Tr. 1810-1811, 1924-1925).

Further, the testimony of the co-inventors is not dispositive, and in the circumstances of this case, the Court is not inclined to give the testimony of the co-inventors much weight insofar as indefiniteness is concerned. First, the co-inventors were called by Newbridge more as fact witnesses than as expert witnesses. Newbridge has urged, and the Court for purposes of this analysis has accepted, Newbridge's contention that the indefiniteness question should be decided as a matter of law. Accordingly, the Court does not find the testimony of these fact witnesses to be particularly probative on the legal question of indefiniteness. Newbridge contends, however, that the inventors should be considered individuals who are extraordinarily skilled in the art, and therefore, their testimony should be highly probative on indefiniteness. (D.I. 628 at 77). While the inventors may well have been extraordinarily skilled in the art in 1988 when they were developing the claimed invention, Newbridge provided no foundational testimony as to why the inventors of the Cheng Patent should still be regarded in the same way or as to why their testimony concerning the invention would be particularly

credible ten years or more after their work on the patent. In fact, the record indicates that Dr. Cheng, for example, had not worked in the field of error correction and detection for about ten years. Thus, while the Court does not entirely discount the testimony of the co-inventors on indefiniteness, the Court finds their testimony insufficient to establish indefiniteness by clear and convincing evidence.

Newbridge also relies on the testimony of its expert witness Dr. Wicker for the proposition that one skilled in the art could not understand the what is claimed in the Cheng Patent. However, Lucent also offered the expert testimony of Dr. Costello that one of ordinary skill in the art would be able to understand and implement the claimed system. To the extent that the Court is required to accept the opinions of one of these experts over the other, the Court is inclined to accept the opinion of Dr. Costello over Dr. Wicker, because in the Court's view, Dr. Costello's testimony comports more with the patent as it is claimed and disclosed in the specification.

Indeed, after reviewing the claimed language in light of the specification, the Court cannot conclude that Newbridge established by clear and convincing evidence that the Cheng Patent is invalid. Newbridge contends that the Cheng Patent lacks adequate structure to support the four means-plus-function elements of Claim 8. However, in light of the express

disclosures in the patent, the Court disagrees with Newbridge's contention. In the Court's view, the '174 specification clearly discloses to one skilled in the art, the structures necessary to support the means-plus-function elements of Claim 8. For example, Claim 8 discloses an ECC means, and the specification discloses the corresponding structure as follows:

An illustrative overall block diagram embodiment of decoder circuit 106 is shown in Figure 8 and is implemented using well known circuits Illustratively, the ECC circuit (107 of Fig. 1) includes the syndrome circuit remainder list and comparison circuit 803, and received word store and correct circuit 805."

Col. 7, ll. 14-16, 21-24 (emphasis added). Claim 8 also discloses an EDC means, and the specification describes such EDC means as follows:

An illustrative overall block diagram embodiment of decoder circuit 106 is shown in Figure 8 and is implemented using well known circuits Illustratively, the EDC circuit (108 of Fig. 1) includes the syndrome circuit 700.

Col. 7, ll. 14-16, 24-25 (emphasis added). Claim 8 discloses a "means for deriving an error signal" and the specification correspondingly provides:

An illustrative overall block diagram embodiment of decoder circuit 106 is shown in Figure 8 and is implemented using well known circuits "The remainder status (i.e., zero or non-zero) from syndrome circuit 700 is outputted to control unit 810 via lead 802 and lead 812. If the remainder is zero 812, indicating no detected errors, the received word is then outputted on lead 111. If the remainder is non zero the received word may either be corrected or discarded depending on the state of control unit 810.

Col. 7, ll. 14-16, 28-35 (emphasis added). And lastly, with respect to the means-plus-function elements of Claim 8, Claim 8 discloses a "switch means" and the specification corresponds:

The control block and switch functionally shown as 109 and 110, respectively, in FIG. 1 are embodied in control unit 810 in FIG. 8.... The control unit 810 shown in FIG. 8 is basically a switch having the switching characteristics shown in FIG. 9. The following description jointly references FIGS. 8 and 9. When the decoder (106 of FIG. 8) is in the ECC state and the remainder 812 from syndrome circuit 700 is zero, the decoder continues in the ECC state. However, when the decoder is in the ECC state and the remainder 802 is non-zero, the control unit switches the next incoming segment header to the EDC state, to process the next header. When the decoder is in the EDC state and the remainder is non-zero, 802, the control unit 810 keeps the decoder in the EDC state for processing the next incoming header. However, when the decoder is in the EDC state and the remainder is zero, 812, the control unit 810 switches the next incoming header to the ECC state.

Col 7. ll36-38; Col. 8 ll. 1-16 (emphasis added). The specification also explains that many of the circuits described above are "well-known" in the art and refers the reader to textbooks and other material that describe these circuits. (col. 7, ll. 14-17; col. 6, ll. 14-17). In addition, the specification includes several block diagrams, including Figure 8, which shows the relationship between the well-known circuits used in the invention and depicts each of the circuits corresponding to the means-plus-function elements of Claim 8. In light of the disclosures in the patent and the testimony of Dr. Costello, the Court cannot conclude that Newbridge has overcome the presumption

of validity by clear and convincing evidence. Accordingly, the Court will deny Newbridge's request for judgment as a matter of law that the Cheng Patent is indefinite.²³

In sum, the Court has been presented with Newbridge's indefiniteness argument four times: in a motion for summary judgment, in the Markman briefing, at trial and in post-trial motions. In each of these four presentations the testimony of the inventor has been Newbridge's primary argument regarding the alleged indefiniteness of the patents. Prior to trial, the Court reserved decision on indefiniteness, in part to gauge the effect of the inventor testimony on this issue. In light of the relevant legal standard, and having heard this testimony and having found it less than probative on the issue, the Court concludes that Newbridge has failed to establish that the Cheng Patents are invalid by reason of indefiniteness. Accordingly,

²³ Although the Court is hesitant to address indefiniteness with regard to the Arpin Patent given Newbridge's success on that Patent, the Court observes that with regard to the Arpin Patent, Newbridge relies almost exclusively on the inventors' alleged lack of understanding regarding the claimed invention to establish that the Arpin Patent is invalid as indefinite. For the reasons discussed in the context of the Cheng Patent, the Court does not find the Arpin inventors' testimony to be dispositive or highly probative on indefiniteness. Accordingly, to the extent that Newbridge relies on inventor testimony alone, the Court cannot conclude that Newbridge established by clear and convincing evidence that the Arpin Patent is indefinite. To the extent Newbridge's argument reiterates the indefiniteness arguments it made during claim construction, the Court rejects those arguments for the reasons discussed in the Court's claim construction of the Arpin Patent.

the Court will deny Newbridge's motion for judgment as a matter of law regarding the validity of the Cheng Patent.

II. Newbridge's Motion for a New Trial on Certain Issues

A. Legal Standard For The Grant Of A New Trial

In pertinent part, Federal Rule of Civil Procedure 59(a) provides:

A new trial may be granted to all or any of the parties and on all or part of the issues in an action in which there has been a trial by jury, for any of the reasons for which new trials have heretofore been granted in actions at law in the courts of the United States.

Fed. R. Civ. P. 59(a). Among the most common reasons for granting a new trial are the following: (1) the jury's verdict is against the clear weight of the evidence, and a new trial must be granted to prevent a miscarriage of justice; (2) newly discovered evidence exists that would likely alter the outcome of the trial; (3) improper conduct by an attorney or the court unfairly influenced the verdict; or (4) the jury's verdict was facially inconsistent. Zarow-Smith v. New Jersey Transit Rail Operations, 953 F. Supp. 581, 584 (D.N.J. 1997) (citations omitted).

The decision to grant or deny a new trial is committed to the sound discretion of the district court. Allied Chemical Corp. v. Darflon, Inc., 449 U.S. 33, 36 (1980); Olefins Trading, Inc. v. Han Yang Chem Corp., 9 F.3d 282 (1993) (reviewing district court's grant or denial of new trial motion under deferential "abuse of discretion" standard). However, where the

ground for a new trial is that the jury's verdict was against the great weight of the evidence, the court should proceed cautiously, because such a ruling would necessarily substitute the court's judgment for that of the jury. Klein v. Hollings, 992 F.2d 1285, 1290 (3d Cir. 1993).

In determining whether to grant a motion for a new trial, the court need not view the evidence in the light most favorable to the verdict winner. However, a new trial should only be granted where "a miscarriage of justice would result if the verdict were to stand," the verdict "cries out to be overturned," or where the verdict "shocks our conscience." Williamson, 926 F.2d at 1352; see also Price, 40 F. Supp. 2d at 550.

B. Whether Newbridge Was Prejudiced By The Timing Of The Court's Claim Construction Rulings

By its Motion For A New Trial, Newbridge contends that it was severely prejudiced by the Court's "failure" to require Lucent to answer claim-contention interrogatories coupled with the Court's deferral of claim construction until the close of the evidence. During discovery, Newbridge served Lucent with interrogatories seeking claim construction. Newbridge contends that despite efforts to have the Court compel this discovery, it never received Lucent's contentions until after the commencement of trial. As a result, Newbridge contends that it faced substantial difficulty in its trial preparation. Further, Newbridge contends that the Court's decision to issue the claim

construction at the time of the jury charge had the effect of discrediting its experts in those situations where the Court's construction agreed with Lucent's position.

Newbridge argues that the prejudice caused by the late issuance of the claim construction ruling was exacerbated by counsel for Lucent in closing argument. Specifically, Newbridge directs the Court to two lengthy portions of Lucent's closing argument in which counsel for Lucent compares the claim construction proposed by Newbridge expert Mr. Overton with the Court's claim construction. (D.I. 628 at 86-87.)

After reviewing Lucent's closing argument, the Court disagrees with Newbridge's contention that Lucent's closing remarks prejudiced Newbridge. Indeed, the passages of Lucent's closing argument cited by Newbridge in support of its position that it was "severely prejudiced" deal with the Arpin patent, a patent on which Newbridge was able to achieve some measure of success. For example, during closing argument, Lucent's counsel addressed whether Newbridge's Mr. Overton was correct that Claim 1 of the Arpin Patent required a separate "feature defining means" and "reporting means" for each port circuit. However, in its verdict, the jury found both Claim 1 and its dependent claim, Claim 4, of the Arpin Patent not infringed. Thus, despite Lucent's efforts to persuade the jury that Newbridge's claim construction differed from the Court's construction or that such

difference mandated a verdict for Lucent, the jury was able to pierce through Lucent's argument.

In addition to the jury verdict in favor of Newbridge on the Arpin Patent despite that portion of the closing argument that Newbridge finds so prejudicial to its case, the Court also concludes that Newbridge's claim of severe prejudice is undercut by its own statements. For example, in its Opposition To Lucent's Motion For Judgment As A Matter Of Law, Newbridge responded to Lucent's argument that Newbridge did not contest Lucent's infringement case as follows:

Newbridge does not agree with the various claim constructions proposed by Lucent and adopted by the Court, but those constructions were not ignored by Newbridge in presenting its case. To the contrary, Newbridge directly addressed those constructions in arguing both its noninfringement case and its validity case.

(D.I. 647 at 16 n.4.) (emphasis added).

In the Court's view, it is difficult to reconcile Newbridge's protests of prejudice in its argument to overturn the unfavorable portion of the jury verdict, with its assurances that it fully countered Lucent's arguments at trial in its argument seeking to preserve the portions of the verdict on which it was successful. In any event, the Court concludes that the jury's verdict on the Arpin Patents and the express contradictions in Newbridge's briefing undermine Newbridge's claim of severe prejudice.

As for Newbridge's argument concerning the timing of the Court's claim construction, the Court begins with several observations. First, The District of Delaware is frequently a forum for patent litigation. Each of the four active judges of the Court is assigned roughly 20 to 25 cases per year, and maintains a caseload of 40 to 50 cases, many of which are the same complexity as the instant action. Almost without exception, the cases that proceed past Rule 12 motions require some amount of claim construction. Second, in adjudicating patent cases, this Court has addressed claim construction at several different stages in an action. In determining when to issue a claim construction decision, the Court weighs such factors as the parties' requests, the current development of the case, the effect a claim construction ruling will have on the future of the case²⁴ and the Court's understanding of the issues.

This action involved five patents, each with at least two claims in issue. The technology taught by the patents was similar, but not so alike that a complete understanding of one would unlock the mysteries of the others. Also, the triable issues were still in flux during the final weeks leading to the trial as evidenced by the addition of Claim 12 of the Eckberg '811 patent in September and the attempt by Newbridge to sever

²⁴ For example, the Court might temporarily withhold its claim construction ruling in the case of parties close to settlement to avoid any disruption.

the Arpin '136 patent from the action at the time of the Pretrial Conference.

In addition to the complexity and fluidity of this action, the Court also determined that it could better understand the complex technology of the patents-in-suit if it heard the background testimony provided by both parties' expert witnesses. In the Court's view, the parties' expert testimony would give the Court the best grasp of the technology at issue, which would in turn, allow the Court to have a more complete understanding of the claims, the specifications and the prosecution histories. The Court sought the most thorough and complete understanding of the technology and the patents in order to provide the parties and the jury with the most accurate claim construction that the Court was capable of rendering. In this case, the Court was well aware of the parties' requests for claim construction at earlier stages of the case, and the Court was not oblivious to the fact that a later ruling increased the difficulty in trial preparation for the parties. However, the Court's ultimate concern was to provide the jury with a claim construction the Court had confidence in, so that the jury could perform its duty of deciding the infringement issues.

After witnessing the trial and reviewing the record, the Court is confident that the parties were able to fairly present their positions and respond to their opponent's position.

Newbridge in particular had the advantage of hearing the plaintiff's case-in-chief before having to present its own evidence. Moreover, the Court believes that the jury's verdict on the Arpin patent demonstrates that the jury did not mindlessly associate claim construction favorable to Lucent with infringement by Newbridge.

The Court has not experienced the perfect trial as of this writing. The Court, wherever possible, acts to accommodate the needs of parties and their counsel. However, the Court also has the duty to ensure that each side has a fair chance to present its case in the context of rulings and decisions that are as consistent and reasoned as humanly possible. In balancing these interests, the Court concluded that the claim construction rulings in this case should be issued after the presentation of the evidence but before the parties' closing arguments. The timing of the Court's claim construction decision did not conflict with Federal Circuit case law, and in the Court's view, did not unduly prejudice either party so as to warrant the granting of a new trial. Accordingly, the Court will deny Newbridge's request for a new trial based upon the timing of the Court's claim construction.

C. Whether The Court's Alleged Failure To Construe Disputed Claim Terms Requires A New Trial

By its Motion, Newbridge also contends that a new trial is warranted, because the Court failed to construe certain disputed

claim terms. According to Newbridge, the court's failure to construe these terms prevented the jury from performing the correct infringement analysis. Specifically, Newbridge raises several terms in the Eckberg '810 and '811 Patents and the Arpin Patent, which Newbridge contends were not construed by the Court. The Court will address each of Newbridge's contentions regarding these phrases in turn:

1. Claim 12, Eckberg '810 patent

(a) "excessive bandwidth packet"

Newbridge advanced an invalidity contention that this preamble language was a limitation, that the specification did not define the term and that the language had no meaning to one of skill in the art. (D.I. 547 at 2-3.) Newbridge did not advance a claim construction for this term as a result of its indefiniteness argument, and Lucent did not seek construction for the phrase. Absent competing constructions by the parties, the Court concluded that this term should be construed based on its plain meaning and instructed the jury accordingly. (D.I. 602 at 18). Accordingly, the Court concludes that Newbridge's argument that the Court declined to construe a disputed term lacks merit insofar as the phrase "excessive bandwidth packet" is concerned.

(b) "incrementing the count in the accumulator by a constant"

Newbridge next contends that the Court failed to construe

the phrase "incrementing the count in the accumulator by a constant." However, a review of the record indicates that the Court did construe this phrase and concluded that this phrase refers to a constant whose range is typically between 0 and 1000. Accordingly, the record belies Newbridge's contention that the Court did not construe this phrase.

(c) "accumulator"

Newbridge next contends that the parties disputed the meaning of the term "accumulator," but the Court failed to construe it. In its opening brief, under the subheading "proposed Construction of Step (d) "... Incrementing the Count in the Accumulator by a constant ..." Newbridge stated the following:

The step of "incrementing the count in the accumulator by a constant" as contained in step (d) means adding to the accumulated count a constant number. "Accumulator" means a device for storing the accumulated count of bytes of data described in step (a).

(D.I. 547 at 9.) Newbridge then argued that the specification supported a construction that the claim required addition of a constant number to the accumulated count and further that the value of the constant could not be zero. Newbridge also advanced a dictionary definition for accumulator.

Lucent did not seek construction of the term "accumulator" in its opening or responsive briefing, but instead concentrated on the issue of whether the specification supported setting the

constant to a value of zero. Newbridge did not pursue "accumulator" in its responsive brief.

The Court viewed the question of the possible value of the constant as the parties' dispute regarding step (d) of the Eckberg '810 patent, and therefore, the Court directed its construction to what it perceived to be the issue presented by the parties. The Court did not believe it was presented with a dispute over the meaning of "accumulator" at the time of the Markman briefing.

However, assuming for the moment that there was a dispute and that the Court's failure to construe the term was error, Newbridge must demonstrate that the error was not harmless within the meaning of Federal Rule of Civil Procedure 61. In pertinent part, Rule 61 provides:

No error . . . or defect in any ruling or order or in anything done or omitted by the court or by any of the parties is ground for granting a new trial or for setting aside a verdict or for vacating, modifying, or otherwise disturbing a judgment or order, unless refusal to take such action appears to the court inconsistent with substantial justice. The court at every stage of the proceeding must disregard any error or defect in the proceeding which does not affect the substantial rights of the parties.

Fed. R. Civ. P. 61.

Applying Rule 61 to this issue, the Court cannot conclude that its failure to construe the term "accumulator" affected Newbridge's substantial rights or was inconsistent with substantial justice. For example, in its review of the record,

the Court noted that the term "accumulator" was mentioned only a single time by Dr. Guerin on direct, and was not mentioned at all in cross-examination. Moreover, the term "accumulator" was not mentioned in either direct or cross-examination when Dr. Guerin resumed the stand at the end of the trial in Lucent's rebuttal case. Also, the Court only found one instance in which Newbridge's expert mentioned the word "accumulator." Moreover, Newbridge has not contended, for example, that a verbatim adoption of its construction of the term "accumulator" would have undermined in any way Lucent's infringement case. Accordingly, the Court concludes that any error caused by the Court's decision not to construe the term "accumulator" was harmless error.

(d) "passing the unmarked or marked packet along in the node"

Like its previous argument, Newbridge contends that the Court did not construe the phrase "passing the unmarked or marked packet along in the node. However, the record again belies Newbridge's contention. The Court construed the phrase "passing the unmarked or marked packet along in the node" to mean "passing the unmarked or marked packet along in the node." In other words, the Court did not agree with Newbridge's contention that there was some additional meaning to the phrase beyond its plain meaning. Accordingly, the Court instructed the jury to assign the phrase its plain meaning. The Court did not then and does

not now believe that it was necessary to read the phrase to the jury as a term in need of construction, and then re-read the phrase again as the Court's construction. Indeed, in the Court's view to do so would have highlighted to the jury the Court's rejection of Newbridge's contention. Because the Court concluded that this phrase should be assigned its plain meaning and conveyed that construction to the jury, the Court rejects Newbridge's argument that the Court failed to construe this phrase.

2. Claim 21 of the Eckberg '811 patent

(a) "excessive rate"

Newbridge contends that the Court failed to construe the term "excessive rate." According to Newbridge, the term "excessive rate" should have been construed to mean "that the determined rate is greater than the subscribed rate." (D.I. 547 at 18.) In response to Newbridge's argument, Lucent stated in its Markman brief: "Newbridge contends that 'excessive rate' means 'that the determined rate is greater than the subscribed rate.' Lucent agrees." (D.I. 568 at 13.) The Court understood the parties' position to mean that there was no dispute as to the meaning of this term, and therefore, the Court did not offer additional construction for the phrase. However, even if the Court committed error by not reading the agreed construction, Newbridge has not demonstrated that the error was anything but

harmless error.

3. Claim 10 of the Eckberg '811 patent

(a) "dropping a data packet to be transmitted from a switch node"

Again, Newbridge contends that the Court did not construe this term. However, Lucent argued that this preamble language was not a limitation on the claim. The Court agreed with Lucent, and concluded that the term should be afforded nothing more than its plain meaning. Because the Court instructed the jury that terms not construed by the Court should be afforded their plain meaning, the Court rejects Newbridge's argument that the Court failed to construe this term.

(b) "excessive rate"

Newbridge raises the same arguments for this term as it did for the same term in the '810 Patent. Accordingly, for the reasons discussed previously, the Court rejects Newbridge's argument.

(c) "dropping the data packet before it is transmitted from the switch node"

Newbridge contends that the Court failed to construe the term "dropping the data packet before it is transmitted from the switch node." Again, however, the record belies Newbridge's contention. Lucent contended that the phrase "dropping the data packet before it is transmitted from the switch node" meant

"dropping the data packet before it is transmitted from the switch node." The Court agreed that this term should be construed in accord with its plain meaning as Lucent contended, and instructed the jury to apply its plain meaning. Accordingly, the Court rejects Newbridge's argument that the Court failed to construe this phrase.

4. Claim 12 of the Eckberg '811 patent

In the context of Claim 12 of the Eckberg '811 Patent, Newbridge reiterates its contention that the Court failed to construe the phrases "dropping a data packet to be transmitted from a switch node" and "excessive rate." For the reasons discussed by the Court in the context of Claim 21 of the Eckberg '810 Patent and Claim 10 of the Eckberg '811 Patent, the Court rejects Newbridge's arguments.

5. Arpin '136 patent

(a) "port circuit"

With regard to the Arpin Patent, Newbridge contends that the Court failed to construe the phrase "port circuit." Newbridge mentioned "port circuits" in its opening Markman brief in the context of an indefiniteness argument, i.e. the Lucent inventors did not know what a "port circuit" was. (D.I. 547 at 45.) Newbridge never offered a competing construction for this phrase, and the parties never sought construction of the term. Accordingly, the Court did not provide a construction for that

which was not contested.

(b) "operating parameters"

Newbridge contends that the Court failed to construe the phrase "operating parameters." As with the phrase "excessive rate," the parties appeared to agree on the construction of the phrase "operating parameters," and therefore, the Court did not construe that which was not in dispute. (D.I. 568 at 40 ("the [parties] appear to be in agreement on the meaning of [operating parameters]"). To the extent that the Court committed any error in failing to read the agreed construction to the parties, Newbridge has not demonstrated that the Court's error was anything but harmless.

In sum, the Court cannot accept Newbridge's argument that it failed to construe certain disputed terms. The terms Newbridge raises were either construed by the Court in accordance with their plain meaning and the jury was so instructed, or there was simply no dispute regarding the meaning of the term such that the Court was required to construe the term. Accordingly, the Court rejects Newbridge's argument that the Court's alleged failure to construe certain terms requires a new trial.

D. Whether The Court's Alleged Erroneous Claim Construction Requires A New Trial

Newbridge next contends that certain claim constructions by the Court are erroneous, and therefore, a new trial is required. The Court ruled on claim construction after a full hearing of

both parties' positions. If the Court committed any error in its ruling, the parties can remedy that error through a proper appeal. Stated another way, Newbridge has not demonstrated that its disagreement with the Court's claim construction is sufficient reason to warrant a new trial. Accordingly, the Court rejects Newbridge's argument that a new trial is warranted based on the Court's claim construction.

E. Whether The Verdicts Of Infringement Of The Asserted Claims Of The Patents-In-Suit Are Against The Weight Of The Evidence Such That A New Trial Is Warranted

Newbridge contends that it should receive a new trial on infringement for the reasons it set forth in its Motion for Judgment as a Matter of Law. To this effect, Newbridge contends that the Court has broad discretion, can reweigh the evidence and need not view the evidence in the light most favorable to the verdict winner. Accordingly, Newbridge contends that the Court may still grant a new trial, even if the jury's verdict was supported by substantial evidence.

In response to Newbridge's argument, Lucent takes issue with Newbridge's proposed standard for granting a new trial. According to Lucent, the Court must still view the evidence in the light most favorable to the moving party when determining whether to grant a new trial.

After reviewing the law as it pertains to this issue, the Court concludes that neither parties' position is entirely

correct. While it is true that the Court need not view the evidence in the light most favorable to the verdict winner when considering whether to grant a new trial, it is also true, that the Court's discretion is more limited when granting a new trial because the jury's verdict is against the weight of the evidence. See e.g. Wilson v. Philadelphia Detention Center, 986 F. Supp. 282, 287 (E.D. Pa. 1997). Specifically, the Court cannot grant a new trial "'merely because the [C]ourt would have weighed the evidence differently and reached a different conclusion.'" Id. (citing Markovich v. Bell Helicopter Textron, Inc., 805 F. Supp. 1231, 1235 (E.D. Pa.), aff'd, 977 F.2d 568 (3d Cir. 1992)). A new trial is only appropriate if the Court finds that the verdict is against the great weight of the evidence or the verdict "shocks the conscience" of the Court. Id.

After reviewing the evidence as it relates to Newbridge's claims, the Court cannot conclude that the jury's verdict was against the great weight of the evidence on those claims in which the Court upheld the jury's verdict. On those claims in which the Court overturned the jury's verdict and found that judgment as a matter of law should be granted in favor of Newbridge, the Court does not believe a new trial is warranted, because the Court's decision is sufficient to resolve the issues. Specifically, Newbridge only sought a new trial as an alternative to its Motion For Judgment As A Matter Of Law. Having accepted

Newbridge's argument regarding Claim 7 of the Cheng Patent, product 36121 related to the Petr patent and Claim 10 of the Arpin patent, the Court need not address Newbridge's alternate argument for a new trial. Accordingly, the Court will deny Newbridge's request for a new trial.

F. Whether The Verdict That The Cheng And Arpin Patents Are Not Anticipated Is Against The Weight Of The Evidence

Newbridge also contends that it is entitled to a new trial on the question of whether the Cheng and Arpin Patents are anticipated. Newbridge bore the burden of proving invalidity by clear and convincing evidence. In evaluating the Cheng Patent, the Court addressed the question of validity, because the Court concluded that Newbridge was not entitled to judgment as a matter of law regarding Claims 8, 9 and 16 of the Cheng Patent. In other words, Newbridge achieved only partial success on this patent, such that the validity issue was still a plausible defense for Newbridge. However, the Court concluded that Newbridge did not offer sufficient evidence to establish invalidity by clear and convincing evidence. Because the evidence offered by Newbridge was insufficient to establish its burden of proof, the Court cannot conclude that the jury's verdict was against the weight of the evidence such that a new

trial is warranted.

As for Claim 10 of the Arpin Patent, the Court declined to address Newbridge's invalidity argument, because Newbridge achieved complete success on Claim 10 of this patent by virtue of the Court's judgment as a matter of law in favor of Newbridge. Because Newbridge's anticipation argument was raised only as a defense and the Court concluded that Newbridge was entitled to judgment as a matter of law on Claim 10 of the Arpin patent, the Court declines to address Newbridge's alternative argument for a new trial as it relates to the Arpin Patent.²⁵

G. Whether Newbridge Was Prejudiced On Jury-Triable Issues By The Court's Decision To Submit The Question Of Indefiniteness To The Jury

In requesting a new trial, Newbridge contends that the Court's submission of indefiniteness to the jury entitles Newbridge to a new trial on all of Newbridge's other jury-triable defenses. Specifically, Newbridge contends that the Court's submission of indefiniteness to the jury diluted all of Newbridge's other defenses.

First, as discussed previously in the context of indefiniteness, the Court cannot conclude that it erred in

²⁵ In addition, the Court has concluded in Section III.B. infra of this Opinion that the jury's verdict of non-infringement regarding Claims 1 and 4 of the Arpin Patent should be sustained. Thus, Newbridge achieved complete success on the Arpin Patent, and therefore, the Court declines to address Newbridge's alternative argument for a new trial.

submitting the question of indefiniteness to the jury. However, even if the Court erred, the Court reviewed the indefiniteness question de novo in the context of Newbridge's motion for judgment as a matter of law so as to correct any error.

Further, to the extent that Newbridge contends that submission of this one issue to the jury tainted or trivialized Newbridge's other defense, the Court rejects Newbridge's argument for several reasons. First, the portion of Lucent's closing argument upon which Newbridge relies for its assertion of prejudice has less to do with the indefiniteness defense and more to do with the fact that Newbridge pursued several alternative theories to infringement. (Tr. 4005-4006). Second, Newbridge cites no case law supporting its assertion that the Court's submission of this defense to the jury would cause prejudice. And third, even if the Court's decision to submit the issue to the jury was error, Newbridge has not demonstrated that this error was so egregious as to render the whole trial unfair. See e.g. Motorola v. Interdigital Tech. Corp., 121 F.3d 1461, 1468 (Fed. Cir. 1997) (citing DMI, Inc. v. Deere & Co., 802 F.2d 421, 427 (Fed. Cir. 1986)). Newbridge has not presented the Court with any evidence that the jury confused or dismissed Newbridge's other defenses because of the indefiniteness issue. Accordingly, the Court concludes that Newbridge is not entitled to a new trial on the basis of the Court's submission of the indefiniteness

defense to the jury.

H. Whether The Jury's Verdicts Are Inconsistent Such That A New Trial Is Warranted

By its Motion For New Trial, Newbridge raises two alleged inconsistencies in the jury verdict, which it contends are sufficient to warrant a new trial. Specifically, Newbridge contends that the jury's verdicts of both literal infringement and infringement under the doctrine of equivalents were irreconcilably inconsistent and in derogation of the Court's instructions, and the jury's verdict on the issue of infringement with respect to Claim 1 and Claim 10 of the Arpin Patent are irreconcilably inconsistent.

1. Whether the jury verdicts on literal infringement and infringement under the doctrine of equivalents were inconsistent so as to warrant a new trial

By its Motion, Newbridge contends that the jury's verdict of infringement is fatally inconsistent, because the jury answered "yes" to both literal infringement and infringement under the doctrine of equivalents concerning Claim 10 of the Arpin Patent and Claim 7 of the Cheng Patent. With regard to Claim 7 of the Cheng Patent and Claim 10 of the Arpin Patent, the Court has previously concluded that Newbridge is entitled to a judgment of non-infringement as a matter of law. Accordingly, the Court declines to address Newbridge's argument that an alleged inconsistency in the jury verdict warrants a new trial.

2. Whether the jury's verdicts on infringement with

respect to Claims 1 and 10 of the Arpin patent are irreconcilably inconsistent such that a new trial is warranted

Newbridge also contends that the jury's verdict of infringement with respect to Claims 1 and 10 of the Arpin Patents cannot be reconciled. Specifically, Newbridge contends that the jury's verdict of no direct infringement of Claim 1, but inducement of infringement of Claim 10 are inconsistent. However, as the Court indicated previously, it has granted Newbridge's request for judgment as a matter of law with respect to Claim 10 of the Arpin Patent and has sustained the jury's verdict in favor of Newbridge on Claim 1 of the Arpin Patent.²⁶ Accordingly, the Court declines to address Newbridge's alternative argument requesting a new trial.

I. Whether The Conduct Of Lucent's Counsel Was So Prejudicial As To Warrant A New Trial

Newbridge next requests a new trial on the basis of two episodes of alleged attorney misconduct by Lucent's counsel. The first instance of alleged misconduct involves statements made by Lucent's counsel during his cross-examination of Newbridge's expert Dr. Wicker. Specifically, Newbridge raises the following exchange between Lucent's counsel and Dr. Wicker:

Q: Dr. Wicker, this isn't the first time you sat in that witness box, is it?

A: It feels like it. Actually it's the second.

²⁶ See infra Section III.B. of this Opinion.

Q: And the last time it was here in Delaware?

A: Two years ago, next door.

Q: And you spoke to a jury just like this one?

A: Yes.

Q: And you gave them your opinions in that case just like you're giving this jury your opinions in this case, is that right?

A: Yes, I did.

Q: And you know what happened, don't you?

MR. RUDISILL: Objection, Your Honor.

THE COURT: Sustained.

* * *

Q: The jury in that case, sir, discarded every single --

MR. RUDISILL: Objection.

THE COURT: Mr. Desmarais, the objection was sustained.

Members of the jury you're to disregard the question and the answer.

(Tr. 2102-2103). The second alleged instance of misconduct was Lucent's use of a demonstrative exhibit regarding licensing during closing argument.

To demonstrate that a new trial is warranted in these circumstances, Newbridge must show that "an error occurred in the conduct of the trial that was so grievous as to have rendered the trial unfair.'" Motorola, 121 F.2d at 1468 (quoting DMI, 802 F.2d at 427). In the case of alleged attorney misconduct, the

party seeking a new trial must demonstrate that the attorney's conduct constitutes misconduct, and not merely aggressive advocacy, and that the misconduct is prejudicial in the sense of affecting a substantial right in the context of the entire trial record. See 12 James Wm Moore et al., Moore's Federal Practice, § 59.13[2][C] (3d ed. 2000). In determining whether alleged misconduct warrants a new trial, the Court must ascertain whether the alleged misconduct made it "reasonably probable" that the verdict was influenced by the misconduct such that a miscarriage of justice would result if a new trial were not granted. See Fineman v. Armstrong World Indus., 980 F.2d 171, 206-07 (3d Cir. 1992); Mobil Oil Corp. v. Advanced Environmental Recycling Technologies, Inc., 869 F. Supp. 258, 259 (D. Del. 1994).

In this case, even if the statements made by Lucent's counsel can be considered misconduct rather than aggressive advocacy, the Court cannot conclude that they were so egregious as to make it reasonably probable that the jury was improperly influenced. Counsel's statement was an isolated incident in the context of a three-week jury trial. Moreover, the Court promptly gave a curative instruction to the jury which not only instructed the jury to disregard the question and answer, but which also highlighted Lucent's counsel failure to adhere to the Court's ruling in that the Court specifically addressed Lucent's counsel, as well as the jury. See C.R. Bard, 1999 WL 458305, *12 (denying

new trial and holding that even if counsel's remarks were prejudicial they were cured by the court's instruction); Mobil, 869 F. Supp. at 262 (denying new trial where counsel's statements were improper, but curative instruction was given immediately following counsel's remarks). Accordingly, in the context of the record as a whole and given the Court's curative remarks, the Court cannot conclude that the statement of Lucent's attorney was so prejudicial as to warrant a new trial.

As for Lucent's use of the demonstrative exhibit during closing argument, the Court likewise concludes that Lucent's use of this exhibit was not so prejudicial as to render the trial unfair. First, the Court overruled Newbridge's objection to the use of this exhibit. Second, the Court gave the jury a cautionary instruction regarding the exhibit, which was proposed and crafted by Newbridge. In these circumstances, the Court cannot conclude that there was a reasonable probability that the jury was improperly influenced. Accordingly, the Court will deny Newbridge's motion for a new trial on the basis of alleged attorney misconduct.

J. Whether Evidence Relating To Newbridge's State Of Mind Was Improperly Excluded Such That A New Trial Is Warranted

Newbridge next contends that it is entitled to a new trial on willfulness, because the Court improperly excluded "state of mind" evidence relating to standards abuse and Newbridge's belief

that such conduct precluded enforcement of the Eckberg, Cheng and Petr Patents. Specifically, Newbridge contends that the Court should not have redacted certain letters, because the "redacted material was contemporaneous evidence of Newbridge's state of mind and directly pertinent to the central issue of Newbridge's good faith basis to believe that it had a right to implement the standards." (D.I. 628 at 108-109).

In response, Lucent contends that "Newbridge volunteered to redact the documents in question in order to resolve Lucent's objection that Newbridge was attempting to use the attorney-client privilege as both a sword and a shield to defend Lucent's charge of willful infringement." (D.I. 645 at 98). According to Lucent, Newbridge blocked Lucent's discovery into Newbridge's investigation of Lucent's patents by raising the attorney-client privilege, and therefore, Newbridge relinquished the right to introduce the same or closely related information at trial.

Newbridge specifically directs the Court to seven documents, Exhibits 1840, 1841, 1842, 1846 and 1860. As a threshold matter, the record indicates that Newbridge did not move Exhibit 1841 into evidence. (Tr. 3239-3240). Accordingly, the Court cannot conclude that Newbridge suffered any prejudice as a result of the alleged improper redaction of that document. With regard to Exhibit 1842, the material to which Newbridge directs the Court was not redacted in the admitted exhibit, and therefore,

Newbridge cannot establish prejudice regarding this document. (DX 1840 at 2). As to the remaining documents, the record indicates that Newbridge's counsel volunteered to redact these documents in order to overcome Lucent's objection to the documents, and therefore, Newbridge did not preserve any objection to the admission of those documents as redacted.²⁷ To the extent that Newbridge contends that witness testimony was improperly excluded, Newbridge has not directed the Court to a proffer of any such testimony, and therefore, the Court cannot evaluate Newbridge's argument. In light of Newbridge's claims of attorney-client privilege which limited Lucent's discovery on Newbridge's investigation into the patents, and Newbridge's subsequent voluntary redaction of these documents to overcome Lucent's objection, the Court cannot conclude that Newbridge was unduly prejudiced by the exclusion of this evidence such that a new trial is warranted.

²⁷ In its Reply Brief, Newbridge directs the Court to a side-bar conference for its position that "[t]he record clearly shows that Newbridge did not agree to the redactions regarding standards abuse that were offered in support of Newbridge's state-of-mind . . ." (D.I. 656 at 73) (citing Tr. 3244-3247:11). The Court is not convinced that this discussion reveals what Newbridge contends. First, the discussion is not entirely clear. Second, Newbridge indicated that it understood the Court's position regarding the standard abuse material. And third, the up-shot of the entire discussion was Newbridge's voluntary redaction of the material at issue. (Tr. 3247:11). Accordingly, the Court cannot conclude based on this record evidence that Newbridge was prejudiced by the redaction of the documents in issue.

K. Whether Newbridge Is Entitled To A New Trial On Damages

1. Whether the jury's damage award should be set aside because of insufficient evidence to support the application of the entire market value rule

By its Motion, Newbridge contends that it was inappropriate for the jury to apply the entire market value rule in this case. Specifically, Newbridge contends that insufficient evidence existed for the jury to conclude that the patented feature constitutes the basis for the consumer demand of the unpatented feature, because Newbridge sold the components alleged to infringe the Cheng and Eckberg '810 and '811 as optional features.

In response to Newbridge's argument, Lucent contends that application of the entire market value rule was appropriate in this case, because Newbridge could reasonably anticipate the sale of the unpatented components at issue with the patented components. In addition, Lucent contends that Newbridge is foreclosed from arguing that a different damages calculation should apply because Newbridge failed to offer any evidence to support an alternative calculation.

As discussed by the Court previously in the context of the 4602 and 46020, under the entire market value rule, a patent owner may recover "damages based on the value of an entire apparatus containing several features, even though only one feature is patented." Kori Corp. v. Wilco Marsh Buggies and

Draglines, Inc., 761 F.2d 649, 656 (Fed. Cir. 1985). The primary inquiry in determining the propriety of applying this rule is "whether a hypothetical licensee would have anticipated an increase in sales of collateral unpatented items because of the patented device." TWM Mfg., 789 F.2d at 901.

After reviewing the record in this case, the Court cannot conclude that the jury's verdict is against the clear weight of the evidence such that a new trial is warranted to prevent a miscarriage of justice. Both Lucent's witnesses and witnesses offered by Newbridge testified that the patented features of the Cheng '174 and Eckberg '810 and '811 Patents were the basis of a strong and important market demand. (Tr. at 307-09, 316, 328-29, 1552-63, 1846, 1848, 1886-87, 1895, 1897-98). For example, with regard to the Cheng '174 Patent, a Lucent technical manager who spoke with customers in order to determine the features they require in certain products, expressly testified that the header error correction and detection features of the '174 Patent are "a requirement" that customers insist upon. (Tr. 316:12-22). Similarly, with regard to the Eckberg '810 and '811 Patents, a Newbridge witness testified regarding customer demand for the features of the Eckberg Patents as follows:

Q: So in this case, you have written three reports, one on 32 kilobit ADPCM, one on congestion management, and one on header error control. Do these three features, are those three features that customers demanded in their products as far as you know?

* * *

A: In the case of congestion control, that is a feature of an ATM network, for example, and its important that one controls congestion problems in ATM networks, mainly because this is a big problem to crack. It was for those people who weren't very pro ATM, and I have to confess that I was one of them a long time ago.

You know, we cited the issue of congestion control as being one of the major nuts to crack. So once somebody has cracked it, this is a big issue solved. Yes, it's a very important feature in my opinion.

(Tr. 1896-1898) (emphasis added).

In addition, Lucent presented evidence at trial that the cards that implement the infringing features are typically sold in conjunction with an overall switch at an aggregate price for all parts (Tr. at 1862), that the individual card has no use unless installed in a Newbridge switch (PX 2750), and that only Newbridge cards function in Newbridge switches. Thus, in the Court's view, Lucent presented sufficient evidence from which a reasonable jury could have found that Newbridge "anticipated the sale of unpatented components together with the patented components" which would warrant application of the entire market value rule. Kori Corp., 761 F.2d at 656 (citations omitted). Because the Court concludes that sufficient evidence existed to support the application of the entire market rule, the Court cannot conclude that the jury's damages award was against the weight of the evidence. Accordingly, the Court will deny

Newbridge's request for a new trial on damages.²⁸

2. Whether the jury improperly awarded royalty damages on noninfringing products

In arguing that it is entitled to a new trial on damages, Newbridge reiterates the argument it raised in its Motion For Judgment As A Matter Of Law that the damages calculation of Lucent's expert Julie Davis relied on incorrect assumptions concerning Newbridge's products. Specifically, Newbridge contends that the jury should not have accepted as true the premise that "if any given Newbridge product was capable of being configured with an infringing feature, then every product of that type was also configured with that infringing feature." (D.I. 628 at 111).

For the reasons the Court discussed previously in the

²⁸ To the extent that Newbridge contends that there was insufficient evidence in light of the jury instruction that the entire market value rule should only be applied where the feature patented constitutes the basis for the consumer demand of the unpatented feature, the Court rejects Newbridge's argument. If anything, the Court's instruction was too narrow in two respects. First, application of the market value rule is permitted "when the patented feature is the basis for customer demand for the entire machine," not just the unpatented feature. Fonar Corp. v. General Electric Co., 107 F.3d 1543 (Fed. Cir. 1997). Second, the Court's instruction did not take into account case law expanding on the entire market theory. However, in the event that the Court's instruction was too narrow, it could only have been detrimental to Lucent. Thus, if the jury found in favor of Lucent on this narrow standard, it certainly would have found in favor of Lucent if a broader standard was used. Accordingly, if the Court's instruction was error, it was a harmless error which was essentially cured by the jury's verdict which favored Lucent despite the narrowness of the Court's instruction.

context of Newbridge's Motion For Judgment As A Matter Of Law, the Court rejects Newbridge's argument. In the Court's view, the jury's verdict is not against the great weight of the evidence or sufficiently shocking so as to warrant a new trial. Although Newbridge is correct that it did not bear the burden of proof on damages, Newbridge certainly could have introduced evidence to refute Lucent's evidence and the reasonable inferences drawn therefrom. Further, to the extent that Newbridge did introduce such evidence through Peter Charbonneau to refute Lucent's allegations, the jury's verdict indicates that they simply did not credit Mr. Charbonneau's testimony. The Court cannot grant a new trial because it would have weighed the evidence differently than the jury and reached a different conclusion. See e.g. Markovich, 805 F. Supp. at 1235 (E.D. Pa.). Accordingly, the Court will deny Newbridge's request for a new trial as it relates to the jury's damages award.

3. Whether the Court's exclusion of Marion B. Stewart's testimony is sufficient to warrant a new trial

Newbridge next contends that it is entitled to a new trial on damages as a result of the Court's decision to exclude the testimony of Marion B. Stewart concerning "the effect of standards-related issues on the outcome of hypothetical negotiation." (D.I. 628 at 113). Specifically, Newbridge sought to introduce testimony from Dr. Stewart that four of the five

patents-in-suit relate to telecommunications industry standards that had been or were about to be adopted by various standards-setting bodies. Dr. Stewart would have further testified that Lucent had an obligation to license its standards patents on reasonable, nondiscriminatory terms, and that, at the time of the hypothetical negotiation, there was substantial evidence that Lucent had abused certain aspects of the standards setting process. Newbridge argues that this evidence would have been relevant to a hypothetical license negotiation between the parties because Newbridge would have been able to establish: (1) that Lucent would be required to give Newbridge a license at a reasonable royalty, and further that Newbridge could not be required to pay a premium as a competitor; and (2) that the evidence of alleged abuse by Lucent of the standards setting process would have worked to Newbridge's favor at a hypothetical negotiation because Newbridge could threaten Lucent with exposure if Lucent was unreasonable.

After reviewing the record as it relates to this issue, the Court cannot accept Newbridge's argument. Contrary to Newbridge's characterization of the Court's ruling, the Court only excluded Dr. Stewart's testimony to the extent that it alleged standards abuse. Indeed, the subject of Mr. Stewart's testimony was discussed at length at a side-bar conference. After the Court made its ruling, Newbridge sought clarification

from the Court specifically on the question of whether Newbridge could raise standards evidence generally. (Tr. 2904:4-9). After discussing the issue further, the Court inquired into whether Newbridge understood the Court's view:

The Court: Does that clarify?

Mr. Quinn: Yes, our understanding is that we are not to get into standards abuse and we don't intend to do it. But insofar as these are standard patents that are otherwise relevant to the damages analysis, we would like to put that evidence in.

(Tr. 2908:6-12). Because the Court's ruling only related to standards abuse as Newbridge's counsel acknowledged, Newbridge was free to introduce testimony regarding the relationship between standards and the Lucent Patents. To the extent that Newbridge declined to introduce evidence other than standards abuse evidence, the decision was Newbridge's choice, and Newbridge cannot establish prejudice from its own trial decisions.

To the extent that Newbridge challenges the Court's underlying decision to exclude Dr. Stewart's standard abuse testimony, the Court cannot conclude that its decision prejudiced Newbridge so as to warrant a new trial. The Court excluded evidence of standards abuse, because the Court concluded that the thrust of the evidence went to Newbridge's equitable defenses, which at the time, were to be heard in a bench trial following

the jury trial. Further, the Court concluded that although standards abuse could be relevant to the hypothetical negotiation analysis, its admission would be unduly prejudicial to Lucent and confusing to the jury. (Tr. at 2902). Because Newbridge has not demonstrated to the Court's satisfaction that its decision to exclude the standards abuse evidence until the equitable trial was sufficiently prejudicial so as to warrant a new trial on damages, the Court will deny Newbridge's request for a new trial.

4. Whether Newbridge was denied a meaningful opportunity to cross-examine the testimony of Lucent's damages expert because of the Court's discovery rulings, such that Newbridge is entitled to a new trial on damages

Newbridge next contends that it is entitled to a new trial on damages, because Newbridge was denied a meaningful opportunity to cross-examine Lucent's "license expert," David Luening. According to Newbridge, Mr. Luening placed in issue Lucent's license negotiations with certain Newbridge competitors by testifying that Newbridge competitors cited the patents-in-suit in the course of license negotiations with Lucent, thereby emphasizing the importance to the industry of the patents-in-suit which would affect the reasonable royalty achieved by Lucent in a hypothetical negotiation. According to Newbridge, it could not meaningfully cross-examine Mr. Luening on this point because, Lucent refused to produce documents related to its license

negotiations²⁹ and because Lucent refused to allow Newbridge to complete a Rule 30(b)(6) deposition on licensing. (D.I. 628 at 116-17).

The parties sharply dispute the facts concerning the documents that were produced and the reasons for Newbridge's incomplete Rule 30(b)(6) deposition on licensing. However, even accepting Newbridge's presentation of the facts surrounding the discovery dispute, the Court is not persuaded that Newbridge was so prejudiced or that a miscarriage of justice occurred, such that Newbridge is entitled to a new trial on damages. Despite Newbridge's claims about inadequate discovery, on cross-examination Newbridge was able to make the point that the patents-in-suit were sufficiently insignificant to Newbridge's competitors that they were not the subject of individual license negotiations. (See e.g. Tr. 1684-1688). Because Newbridge has not demonstrated a miscarriage of justice or that it was so prejudiced in its cross-examination of Mr. Luening's that a new trial is warranted, the Court will deny Newbridge's motion for a new trial on damages.

III. Lucent's Motion For Judgment As A Matter Of Law

Pursuant to Federal Rule of Civil Procedure 50(b), Lucent requests the Court to enter a judgment of infringement as a

²⁹ Newbridge moved to compel the discovery. The Court denied the motion. (D.I. 319.)

matter of law on Claims 1 and 4 of the Arpin '136 Patent. The Court will consider each of Lucent's claims in turn.

A. Legal Standard For Judgment As A Matter Of Law

The standard of review applicable to Lucent's Motion For Judgment As A Matter Of Law is the same as that set forth in Part II.A. of this Opinion. The Court must view the evidence in the light most favorable to the verdict winner and must give the benefit of all reasonable inferences to the verdict winner. In addition, however, it should be noted that judgment as a matter of law is considered an extraordinary remedy for an unsuccessful plaintiff who bore the burden of proof at trial. Dragan v. L.D. Caulk Co., 12 U.S.P.Q.2d 1081, 1083 (D. Del. 1989), aff'd, 897 F.2d 298 (Fed. Cir. 1990); see also Stainton v. Tarantino, 637 F. Supp. 1051, 1075 (E.D. Pa. 1986) ("Judgment notwithstanding the verdict is an extraordinary remedy when urged by an unsuccessful plaintiff who bore the burden of proof at trial.") (citing Fireman's Fund Ins. v. Videfreeze Corp., 540 F.2d 1171, 1177 (3d Cir. 1976)). In these circumstances, a court should only grant a motion for judgment as a matter of law when allowing the verdict to stand would result in manifest injustice. Dragan, 12 U.S.P.Q. 2d at 1084.

B. Whether The Jury's Verdict Of Noninfringement Of Claims 1 And 4 Of The Arpin Patent Is Supported By Substantial Evidence

By its Motion For Judgment As A Matter Of Law, Lucent

contends that it presented substantial evidence of infringement, such that the Court should enter judgment as a matter of law in favor of Lucent on Claims 1 and 4 of the Arpin Patent. Lucent contends that its evidence was uncontested by Newbridge, and therefore, Lucent is entitled to judgment as a matter of law, because Newbridge failed to controvert Lucent's prima facie case of infringement.

In response to Lucent's argument, Newbridge contends that while it disagreed with the Court's claim construction rulings, it responded to those constructions and each of Lucent's infringement arguments. In addition, Newbridge contends that Lucent's evidence of infringement was both insubstantial and unavailing under either a literal infringement theory or infringement under the doctrine of equivalents. Viewing the evidence in the light most favorable to Newbridge as the verdict winner on Claim 1 and 4 of the Arpin Patent, Newbridge contends that the Court should sustain the jury's verdict. Specifically, Newbridge contends that Lucent failed to present evidence to support that certain features of the Arpin Patent were met by Newbridge's accused products.

Based on the record relating to the Arpin Patent, the Court cannot conclude that Newbridge failed to contest Lucent's arguments such that Lucent is entitled to judgment as a matter of law on its prima facie case of infringement. That the Court

concluded that certain claim limitations do or do not require certain conditions did not automatically mandate a finding in favor of Lucent. Rather, to prove literal infringement or infringement under the doctrine of equivalents, the interpreted claim functions and corresponding structures still needed to be compared with the accused functions and structures to determine if such structures and functions were met in the accused products either literally or equivalently. In this case, the jury was commissioned to perform this last comparison step of the respective infringement analyses. Accordingly, the Court will turn to the question of whether Lucent established that the claim functions and structures were identically or equivalently present in the accused Newbridge devices such that a finding of infringement is mandated as a matter of law.

1. Whether Lucent presented sufficient evidence that the feature defining means limitation was met by Newbridge's products

The first element of Claim 1 of the Arpin '136 Patent is the "feature defining means." In pertinent part, Claim 1 provides:

A communication system comprising . . .

feature defining means at each of said port circuits
for storing operating parameters defining a plurality
of features which can be performed thereat . . .

(col. 10, l. 4-11). Construing this means plus function element, the Court stated:

The function of this element is to store operating
parameters defining a plurality of features which can

be performed thereat. The structure associated with this function is a memory, such as Random Access Memory (RAM). The phrase "at each of said port circuits" does not require that each port circuit have its own separate defining means. The term "features" refers to user-selectable functions.

(D.I. 602 at 22).

After reviewing the evidence presented by both Lucent and Newbridge as it relates to this element, the Court cannot conclude that insufficient evidence supports the jury's verdict of noninfringement such that Lucent is entitled to judgment as a matter of law. In discussing this element of Claim 1, Lucent's expert only took into account a portion of the Court's claim construction relating to this element. Specifically, Dr. Baugh testified regarding this element's function of "storing" or "storing the operating parameters," however, he did not take into account the fact that the Court's claim construction required storing operating parameters "defining a plurality of features which can be performed thereat." In other words, Dr. Baugh did not discuss the fact that this function as recited in the claim language requires specific operating parameters that define features to be performed at the port circuits. (Tr. 1261, 1287, 1294, 1315, 1328, 1344, 1354). Because Dr. Baugh's testimony did not explain the presence of this feature either equivalently or literally in the accused products, the jury could have reasonably concluded that the Newbridge products did not fully perform the function described in this element or that Lucent's expert failed

to consider the full claim language such that this element of the claim did not read on the accused devices.³⁰ Accordingly, the Court cannot conclude that the jury erred in its finding of noninfringement.

2. Whether Lucent presented sufficient evidence that the means connected limitation was met by Newbridge's products

The fourth element of Claim 1 of the Arpin '136 Patent is the:

means connected to said memory means and responsive to the receipt of said type code from each reporting circuit for accessing said memory means using said type code and for sending predetermined operating parameters to said each reporting circuit thereby defining one or said plurality of features to be performed thereat.

(col. 10, l. 21-27). Construing the disputed aspects of this element, the Court stated:

The function of this element is accessing the memory means [using said type code] and sending predetermined operating parameters. The structure associated with this element is the microprocessor associated with the central call processor unit 101, which executes

³⁰ To the extent that Lucent contends that Newbridge's argument is a rehash of the claim construction argument rejected by the Court, the Court disagrees with Lucent. The Court's claim construction only stated that the phrase "at each of said port circuits" does not require that each port circuit have "it own separate defining means." However, the claim language still requires operating parameters that define features to be performed at the port circuits. Thus while separate defining means are not needed at each port circuit, operating parameters that define features to be performed at the port circuits are still required. Accordingly, the Court's agreement with Newbridge on this point is not inconsistent with the Court's claim construction and its rejection of a "separate" defining means for each port circuit.

programs to perform the accessing and the sending of the operating parameter.

(D.I. 602 at 23).

Newbridge contends that Lucent did not offer sufficient evidence to establish as a matter of law that this element was present in the accused Newbridge devices. Specifically, Newbridge contends that the jury could have reasonably concluded that Newbridge products do not access the databases in their memories using a port circuit identification code, because they access databases according to physical location.

In reply to Newbridge's argument, Lucent contends that it proved at trial that Newbridge products use identification type codes "in addition to slot location information, to access the system memory and send appropriate operating parameters to the smart cards." (D.I. 661 at 9). According to Lucent, Newbridge cannot avoid infringement because its product merely adds an additional element of slot location. (D.I. 661 at 9) (citing A.B. Dick Co., 713 F.2d at 703).

After reviewing the evidence presented by the parties on this element, the Court cannot conclude that the jury's verdict was erroneous as a matter of law. The plain and express language of Claim 1 of the Arpin '136 Patent requires the use of an identification type code. As the Court discussed in the context of the related Claim 10 of the Arpin '136 Patent, Newbridge's expert, Mr. Overton, testified at length that Newbridge products

do not access by port circuit type code. According to Mr. Overton, the Newbridge products at issue use only physical slot location for accessing purposes. (Tr. 2825-2827).³¹

Although Lucent's expert, Dr. Baugh disputed this contention, the jury could have reasonably credited the testimony of Mr. Overton over Dr. Baugh. For example, on cross-examination of Dr. Baugh, Newbridge probed Dr. Baugh's understanding of the alleged use of the identification type codes in the Newbridge products, and Dr. Baugh was essentially unable to answer Newbridge's questions with any detail. (See e.g. Tr. 1374-1375). Thus, it would not be unreasonable to infer from the jury's verdict that they chose to credit the testimony of Mr. Overton over the testimony of Dr. Baugh on the question of whether Newbridge products use physical slot location or identification type codes for the accessing function of this element. As the Court noted previously, it is not at liberty to re-weigh the evidence or credit the testimony of one witness over the other on a motion for judgment as a matter of law. Because the Court

³¹ To the extent that Lucent contends that a verdict for Newbridge is inconsistent with the Court's claim construction insofar as this element is concerned, the Court disagrees with Lucent. Even Lucent, through its brief, has argued that Newbridge products use both identification type code and physical slot location, i.e. a recognition that identification type code is required under the claim language. Mr. Overton's testimony, however, was that Newbridge's products use only slot location for accessing. Given Mr. Overton's testimony, the Court cannot conclude that the jury's verdict is unsupportable.

cannot substitute its judgment for the jury's judgement and because substantial evidence in the form of Mr. Overton's testimony supports Newbridge's assertion that its products do not use the identification type code required for access purposes required by the last element of Claim 1 of the Arpin '136 Patent, the Court cannot conclude that the jury's verdict is erroneous. Accordingly, the Court will deny Lucent's Motion For Judgment As A Matter Of Law on Claim 1 of the Arpin '136 Patent.

Having concluded that the jury could have reasonably found that at least two elements of Claim 1 of the Arpin Patent were not present in the accused Newbridge products, the Court need not consider the remaining arguments advanced by the parties concerning the presence or absence of other claim elements. Further, because Claim 4 is dependent on Claim 1, the Court's analysis applies equally with respect to Claim 4. Accordingly, the Court concludes that Lucent is not entitled to a judgment of infringement as a matter of law with respect to Claims 1 and 4 of the Arpin '136 Patent.

CONCLUSION

For the reasons discussed, Newbridge's Renewed Motion For Judgment As A Matter Of Law will be granted in part and denied in part, and its Motion For A New Trial On Certain Issues will be denied. In addition, Lucent's Motion For Judgment As A Matter Of Law will be denied. In accordance with the jury's verdict, the

Court will enter a judgment of infringement against Newbridge and in favor of Lucent with respect to Claims 12 and 21 of the Eckberg '810 Patent, Claims 10 and 12 of the Eckberg '811 Patent, Claims 8, 9 and 16 of the Cheng Patent and Claims 1 and 8 of the Petr '087 Patent, the Court's judgment regarding the Petr Patent being limited to Newbridge's VCM3 and Voice Band Products only. In accordance with the Court's rulings on Newbridge's Motion For Judgment As A Matter Of Law, the Court will enter a judgment of noninfringement in favor of Newbridge and against Lucent on Claim 7 of the Cheng Patent, Claim 10 of the Arpin Patent, and Claim 1 and 8 of the Petr Patent, the Court's judgment of noninfringement regarding the Petr Patent extending only to Newbridge's 36121 product. Further and in accordance with the jury's verdict, the Court will enter a judgment of non-infringement in favor of Newbridge and against Lucent on Claims 1 and 4 of the Arpin Patent.

An appropriate Order will be entered.

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

LUCENT TECHNOLOGIES, INC. :
 :
 Plaintiff, :
 :
 v. :
 :
NEWBRIDGE NETWORKS CORP. :
and NEWBRIDGE NETWORKS, INC. :
 :
 Defendants. :

Civil Action No. 97-347-JJF

O R D E R

At Wilmington, this 21 day of September 2001, for the
reasons set forth in the Opinion issued this date;

IT IS HEREBY ORDERED that:

1. The Motion For Judgement As A Matter Of Law (D.I. 616)
filed by Plaintiff, Lucent Technologies, Inc., is DENIED.

2. The Renewed Motion For Judgment As A Matter Of Law At
The Close Of The Evidence (D.I. 618) filed by Defendants,
Newbridge Networks Corporation and Newbridge Networks Inc., is
GRANTED IN PART AND DENIED IN PART.

3. The Motion For A New Trial On Certain Issues (D.I. 617)
filed by Defendants, Newbridge Networks Corporation and Newbridge
Networks Inc., is DENIED.

4. In accordance with the jury's verdict and the Court's
rulings on the Renewed Motion For Judgment As A Matter Of Law At
The Close Of The Evidence (D.I. 618) filed by Defendants,
Newbridge Networks Corporation and Newbridge Networks Inc., the
Clerk shall enter judgment in favor of Plaintiff, Lucent

Technologies, Inc., and against Defendants, Newbridge Networks Corporation and Newbridge Networks Inc., with respect to Claims 12 and 21 of the Eckberg '810 Patent, Claims 10 and 12 of the Eckberg '811 Patent, Claims 8, 9 and 16 of the Cheng Patent, and Claims 1 and 8 of the Petr '087 Patent, the Court's judgment regarding the Petr Patent being limited to Defendants' VCM3 and Voice Band Products only.

5. In accordance with the Court's rulings on the Renewed Motion For Judgment As A Matter Of Law At The Close Of The Evidence (D.I. 618) filed by Defendants, Newbridge Networks Corporation and Newbridge Networks Inc., the Clerk shall enter a judgment of non-infringement in favor of Defendants, Newbridge Networks Corporation and Newbridge Networks Inc., and against Plaintiff, Lucent Technologies, Inc., on Claim 7 of the Cheng Patent, Claim 10 of the Arpin Patent, and Claim 1 and 8 of the Petr Patent, the Court's judgment of non-infringement regarding the Petr Patent extending only to Defendants' 36121 product.

6. In accordance with the jury's verdict and the Court's rulings on the Motion For Judgment As A Matter Of Law (D.I. 616) filed by Plaintiff, Lucent Technologies, Inc., the Clerk shall enter a judgment of non-infringement in favor of Defendants' Newbridge Networks Corporation and Newbridge Networks Inc., and against Plaintiff, Lucent Technologies, Inc., on Claims 1 and 4 of the Arpin Patent.

JOSEPH J. FARNAN, JR.
UNITED STATES DISTRICT JUDGE